

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

RHOADS INDUSTRIES, INC., et al	:	CIVIL ACTION
	:	
v.	:	NO. 15-921
	:	
SHORELINE FOUNDATION, INC., et al	:	

RHOADS INDUSTRIES, INC., et al	:	CIVIL ACTION
	:	
v.	:	NO. 17-266
	:	
TRITON MARINE CONTRUCTION	:	
CORP.	:	

MEMORANDUM OPINION

DAVID R. STRAWBRIDGE
UNITED STATES MAGISTRATE JUDGE

July 2, 2021

Presently before the Court are the motions to preclude or limit expert testimony of Plaintiffs Rhoads Industries, Inc. and Rhoads Marine Industries, Inc. (collectively “Rhoads”) and Defendants (collectively “Defendants”) Triton Marine Construction Corporation (“Triton”), TranSystems Corporation (“TranSystems”), and Shoreline Foundation, Inc. (“Shoreline”). Rhoads filed motions to preclude seven of Defendants’ experts, and Defendants’, jointly or individually, filed four motions to preclude Rhoads’ experts. In this omnibus opinion, we address separately each of these eleven motions. First, we provide the relevant background information. Next, we set out the legal standards governing motions to preclude expert testimony. Finally, we discuss and reach a determination on each individual motion.

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I. BACKGROUND

As we write primarily for the parties, to whom the relevant facts and circumstances of these motions are well known, we provide here only a brief statement of relevant background information. This litigation arises from a situation in which Defendants were completing construction projects, which involved pile driving, in the Philadelphia Navy Yard (“Navy Yard”), within the vicinity of certain properties and structures leased by Rhoads, allegedly causing damage.

More particularly, Rhoads leased property in the Navy Yard from the Philadelphia Authority for Industrial Development on November 3, 2010. (Civ. No. 17-266, Doc. 1 ¶ 10.) In relevant part, that property includes Dry Dock 2 (“the dry dock” or “Dry Dock 2”) and Building 669. (*Id.*) The United States Navy then undertook a project to complete certain improvements to property adjacent to Rhoads’ property. (Civ. No. 15-921, Doc. 1 ¶ 16.) The project and its specifications were designed by TranSystems, and the Navy awarded the contract for the execution of the project to Shoreline. (*Id.* ¶ 17–18.) Between approximately August 2011 and January 2013, Shoreline drove piles on various occasions in the area to the west of the dry dock as part of its construction activities. Subsequently, the Navy undertook another project, and this time awarded the contract to Triton. (Civ. No. 17-266, Doc. 1 ¶ 10.) Beginning in 2014 and

during the course of its work on the project, Triton drove piles in the area to the east of the dry dock. (*Id.* ¶ 15.)

Rhoads alleges that Defendants' pile driving caused subsidence, or sinkholes, to form in the areas to both the east and west of the dry dock, and that the subsidence caused "significant damage" to its property, resulting in repair cost damages and lost business income. Defendants do not dispute the existence of the subsidence but maintain that their pile driving activities were not the cause of any subsidence that impacted Rhoads' property. Further, Defendants contend that, even if Rhoads prevails on liability, the extent of its damages is overstated. This case therefore presents complex questions of causation, standard of care, and damages, necessitating extensive expert testimony. In resolving these motions to preclude or limit that testimony, we observe that the parties have been nimble enough to significantly adjust their views as to what constitutes an opinion that is "qualified" and "reliable," and that "fits," based upon which side of a motion they find themselves. We now turn to set out the legal standards governing these motions.

II. LEGAL STANDARDS

Federal Rule of Evidence 702, which governs the admissibility of expert testimony, was "amended in response to *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), and to the many cases applying *Daubert*, including *Kumho Tire Co. v. Carmichael*, 119 S.Ct. 1167 (1999)." Fed.R.Evid. 702, Advisory Committee Notes, 2000 Amendments. In *Daubert*, the Supreme Court "charged trial judges with the responsibility of acting as gatekeepers to exclude unreliable expert testimony, and the Court in *Kumho* clarified that this gatekeeper function applies to all expert testimony, not just testimony based in science." *Id.* The rule provides that:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed.R.Evid. 702. The Third Circuit has “explained that ‘Rule 702 has three major requirements: (1) the proffered witness must be an expert, *i.e.*, must be qualified; (2) the expert must testify about matters requiring scientific, technical or specialized knowledge[, *i.e.*, reliability]; and (3) the expert's testimony must assist the trier of fact[, *i.e.*, fit].’” *United States v. Schiff*, 602 F.3d 152, 172 (3d Cir. 2010) (quoting *Pineda v. Ford Motor Co.*, 520 F.3d 237, 244 (3d Cir. 2008)) (alterations in original). The trial court “acts as a gatekeeper to ensure that any and all expert testimony or evidence is not only relevant, but also reliable.” *Schiff*, 602 F.3d at 172 (internal citation omitted). To that end, “the trial judge evaluates its admissibility based on these three requirements.” *Id.* The burden is on the proponent of the expert testimony to establish “by a preponderance of proof” that each requirement is satisfied. *Oddi v. Ford Motor Co.*, 234 F.3d 136, 144 (3d Cir. 2000) (quoting *Daubert*, 509 U.S. at 593 n.10).

With respect to the first admissibility requirement, an expert is “qualified” if “the witness possess[es] specialized expertise.” *Schneider ex rel. Estate of Schneider v. Fried*, 320 F.3d 396, 404 (3d Cir. 2003). The Third Circuit has “interpreted this requirement liberally, holding that ‘a broad range of knowledge, skills, and training qualify an expert.’” *Id.* (quoting *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 741 (3d Cir. 1994)). Accordingly, “it is an abuse of discretion to exclude testimony simply because the trial court does not deem the proposed expert to be the best qualified or because the proposed expert does not have the specialization that the court

considers most appropriate.” *Holbrook v. Lykes Bros. S.S. Co.*, 80 F.3d 777, 782 (3d Cir. 1996). At a minimum, however, “a proffered expert witness must possess skill or knowledge greater than the average layman.” *Betterbox Commc'ns Ltd. v. BB Techs., Inc.*, 300 F.3d 325, 328 (3d Cir. 2002) (internal quotations, citations, and alterations omitted).

The second requirement of Fed.R.Evid. 702 is that “the process or technique the expert used in formulating the opinion is reliable.” *Paoli*, 35 F.3d at 742. To meet the reliability standard, the proffered testimony must “be based on the methods and procedures of science, not on subjective belief and unsupported speculation.” *Karlo v. Pittsburgh Glass Works, LLC*, 849 F.3d 61, 80–81 (3d Cir. 2017) (quoting *In re TMI Litig.*, 193 F.3d 613, 703–04 (3d Cir. 1999), *amended*, 199 F.3d 158 (3d Cir. 2000) (internal quotations omitted). “‘The test of admissibility is not whether a particular scientific opinion has the best foundation, or even whether the opinion is supported by the best methodology or unassailable research.’ Instead, the court looks to whether the expert’s testimony is supported by ‘good grounds.’” *Id.* at 81 (quoting *TMI*, 193 F.3d at 665); *see also Paoli*, 35 F.3d at 742 (explaining that there may be good grounds “even if the judge thinks that a scientist’s methodology has some flaws such that if they had been corrected, the scientist would have reached a different result.”). “The standard for reliability is ‘not that high.’” *Karlo*, 849 F.3d at 81 (quoting *TMI*, 193 F.3d at 665). It is “lower than merits standard of correctness,” *id.*, but it is “higher than bare relevance.” *Paoli*, 35 F.3d at 744. “As long as an expert’s scientific testimony rests upon good grounds it should be tested by the adversary process—competing expert testimony and active cross-examination—rather than excluded from jurors’ scrutiny for fear that they will not grasp its complexities or satisfactorily weigh its inadequacies.” *United States v. Mitchell*, 365 F.3d 215, 234 (3d Cir. 2004) (internal citation and quotations omitted).

The Third Circuit has set out several factors that trial courts may consider in determining whether a particular methodology is reliable, including:

(1) whether a method consists of a testable hypothesis; (2) whether the method has been subject to peer review; (3) the known or potential rate of error; (4) the existence and maintenance of standards controlling the technique's operation; (5) whether the method is generally accepted; (6) the relationship of the technique to methods which have been established to be reliable; (7) the qualifications of the expert witness testifying based on the methodology; and (8) the non-judicial uses to which the method has been put.

Pineda, 520 F.3d at 247–48 (citing *Paoli*, 35 F.3d at 742 n.8). These factors, however, “are neither exhaustive nor applicable in every case.” *Kannankeril v. Terminix Int’l, Inc.*, 128 F.3d 802, 806–07 (3d Cir. 1997). Testimony on technical or other specialized subjects, for example, “forensic engineering evaluations,” may not “fit neatly” within the elements listed in *Paoli*. See *Pineda*, 520 F.3d at 248; *Dalton v. McCourt Elec. LLC*, 112 F. Supp. 3d 320, 329 (E.D. Pa. 2015). Rather, “[t]he inquiry envisioned by Rule 702 is a flexible one.” *Id.* (quoting *Daubert*, 509 U.S. at 594) (internal quotations and alterations omitted).

The “fit” requirement ensures that there is a sufficient nexus “between the expert’s testimony and the facts that the jury is being asked to consider.” *Schiff*, 602 F.3d at 173 (citing *Daubert*, 509 U.S. at 591). The testimony must be “sufficiently tied to the facts of the case [such] that it will aid the jury in resolving a factual dispute.” *Id.*; see also *TMI*, 193 F.3d at 663 (quoting Fed.R.Evid. 702(a)) (evidence or testimony “fits” where it “[helps] the trier of fact to understand the evidence or to determine a fact in issue”) (alteration in original). “Put another way, [the fit requirement] is a question of relevance, and Rule 702 has a liberal policy of admissibility if [expert testimony] has the potential for assisting the trier of fact.” *Schiff*, 602 F.3d at 173 (internal citations and quotations omitted). Like the reliability prong, the fit standard “is not that high,” but “is higher than bare relevance.” *Paoli*, 35 F.3d at 745.

Finally, we note that, in general Fed.R.Evid. 702 has a “liberal policy of admissibility,” *Pineda*, 520 F.3d at 243, and that, as such, the “rejection of expert testimony is the exception and not the rule.” Fed.R.Evid. 702, Advisory Committee Note, 2000 Amendments. In determining whether to admit expert testimony, we do “not weigh the evidence relied upon or determine whether it agrees with the conclusions reached therein.” *Walker v. Gordon*, 46 Fed.Appx. 691, 695 (3d Cir. 2002). Rather, “the credibility and weight of [the expert] testimony is to be determined by the jury, not the trial judge.” *Id.* (internal citation and quotations omitted); *see also Daubert*, 509 U.S., at 596 (“Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.”).

III. DISCUSSION

A. Rhoads’ motion to preclude Mark Kilgore (Civ. No. 17-266, Doc. 145)

Rhoads moves to exclude the testimony of TranSystem’s expert Mark Kilgore. (Civ. No. 17-266, Doc. 145.) TranSystems has proffered Kilgore to testify to the standard of care that applies to engineers on maritime projects, and to whether TranSystem’s conduct fell within that standard. Doc. 162 at 2. Rhoads moves to exclude Kilgore solely on the basis that he is allegedly unqualified to offer an opinion on this subject in that he “has never practiced engineering in Philadelphia or Eastern Pennsylvania.” Doc. 145-2 at 4. Rhoads’ argument is based on Kilgore’s deposition testimony that the relevant standard of care is not documented but rather is something that is learned through experience “practicing engineering in [the relevant] geographic area.” *Id.* at 3–4 (citing Kilgore Dep. at 20:25–22:20). Rhoads thus argues that Kilgore is not qualified “[b]ased on his own criteria,” because the relevant geographic location is “Philadelphia or

eastern Pennsylvania,” and Kilgore admits that he has not worked on projects in that specific geographic area. *Id.* at 3–4 (citing Kilgore Dep. at 22:25–23:21).

We are unpersuaded by Rhoads’ argument. First, while Rhoads would have us accept that Kilgore is not qualified to testify as to the standard of care based on his own criteria, the opposite is true. In fact, a review of his deposition testimony confirms that Rhoads does meet the subjective criteria for qualification that he articulated. Indeed, immediately after stating that one becomes familiar with the regional standard of care by practicing engineering “in the City of Philadelphia or Eastern Pennsylvania,” Kilgore affirmatively answered the question, “Have you ever done any projects in the Philadelphia area?” stating, “Yes, I have.” Kilgore Dep. at 22:25–23:3. He then explained that he had worked on a project in Wilmington, Delaware. *Id.* at 23:5–23:9. Viewing his statements in context, it is clear that under Kilgore’s subjective criteria for qualification, Wilmington, Delaware also falls within his subjective definition of the “Philadelphia area.” We will not accept Rhoads’ invitation to preclude a witness on the basis of this apparently inadvertent miscue or miscommunication in a deposition.

Moreover, it is not for a witness to set the bounds of what qualifies an expert through subjective criteria in deposition testimony. Rather, the Federal Rules of Civil Procedure and courts interpreting them have set out standards by which we determine whether an expert is qualified. Those standards require simply that “the witness possess specialized expertise.” *Schneider*, 320 F.3d at 404. The Third Circuit has explicitly “interpreted this requirement liberally,” explaining that a “a broad range of knowledge, skills, and training qualify an expert.” *Id.* (quoting *Paoli*, 35 F.3d at 741). It has “eschewed imposing overly rigorous requirements of expertise and [has] been satisfied with more generalized qualifications.” *Id.*

Here, Rhoads asks us to impose a specific requirement that would be determinative of qualification, that the expert himself, seemingly inadvertently, invented in a deposition. We decline to do so. As TranSystems argues, Kilgore meets the standard for qualification as set out by the Third Circuit through his “education, practical experience, training, and credentials.” Kilgore has been proffered to testify to the standard of care for engineers working on maritime projects. On that subject, he holds a bachelor’s degree in mechanical engineering, a master’s degree in civil engineering, and a Ph.D. in construction management. Doc. 162-2 at 1. He holds professional licensure as a Registered Professional Engineer in twelve states, including Pennsylvania. *Id.* He testified that he has worked on maritime projects specifically involving pile driving. Kilgore Dep. at 92:17. Thus, while Kilgore may be even more qualified to offer the opinion had he practiced specifically in Philadelphia or eastern Pennsylvania, excluding him on that basis would contravene “Rule 702’s liberal policy of admissibility.” *Paoli*, 35 F.3d at 741. Indeed, “exclusion [is] not the proper remedy simply because the experts [do] not have the degree or training which the district court [thinks] would be *most* appropriate.” *Id.* (emphasis added) (internal citation and quotations omitted). Accordingly, Rhoads’ motion to exclude Kilgore (Doc. 145) is denied.

B. Defendants’ motion to preclude Edward Garbin (Civ. No. 15-921, Doc. 139)

Rhoads retained Garbin “to assess whether the pile driving operations on adjacent sites triggered sinkhole-like depressions on both the west and east sides of Dry Dock 2.” (Civ. No. 15-921, Doc. 145.) In his report, Garbin concluded that “the pile driving operations at the Barge Basin and Pier 4 are responsible for the major ground subsidence events and resulting damage observed at [Dry Dock 2, Building 669], and the crane rail. (Doc. 145-2 at 9) (“Garbin Rep.”).

1. Qualification

Defendants first contend that Garbin “is not qualified to offer testimony regarding the process or effects of pile driving.” Doc. 139 at 9. Defendants argue that he is not qualified in that he allegedly “lacks any particular training, education, knowledge, or professional skill with regards to pile driving or dry dock construction.” *Id.* They further allege that Garbin “has not done any work projects where he was tasked with inspecting or overseeing pile driving activities.” *Id.* In response, Rhoads contends that Defendants’ emphasis on “personal experience driving piles” is “too narrow a qualification and is not supported by the *Daubert* analysis.” We agree.

Garbin’s qualifications are extensive. He holds a Ph.D. in Civil Engineering with an emphasis on geotechnical engineering, as well as the Diplomate, Geotechnical Engineering certification from the American Society of Civil Engineers, which Rhoads asserts is “one of the highest designations in the Geo-Profession.” Doc. 145 at 2. Garbin’s academic training in geotechnical engineering is directly relevant to the issues on which he opines. Geotechnical engineering concerns the “disciplines of rock and soil mechanics to investigate subsurface and geologic conditions . . . to design, and build foundations, earth structures, and pavement subgrades.” *Geotechnical Engineering*, AM. SOC. GEOTECHNICAL ENGRS., <https://www.asce.org/geotechnical-engineering/geotechnical-engineering/>. Geotechnical engineering includes study of the mechanics of soil and rock and its application to the design and construction of foundations that are supported by soil and rock. *See What is Geotechnical Engineering?*, SOC’Y SOIL MECH. AND GEOTECHNICAL ENGR., <http://www.whatisgeotech.org/>. As such, geotechnical engineering is the academic field most closely related to the issues in this case, as it concerns the conditions of subsurface material.

Garbin testified that he has academic training in soil dynamics, structural dynamics, and vibrations, and that he has taken continuing education courses in pile driving. Garbin Dep. at 27:6-27:23 In addition to his academic training, he testified that he has personally investigated “the cause of subsidence” “many times,” and that he has worked on “deep foundation projects,” including driven pile projects. *Id.* at 34:19-37:9

Defendants’ characterization of the category of expertise required to offer an opinion on this subject matter is too narrow. To the contrary, “a broad range of knowledge, skills, and training qualify an expert.” *Paoli*, 35 F.3d at 741. Indeed, it is not required that Garbin be an expert in “pile driving.” Rather, the question in this case is whether and to what extent pile driving had an impact on subsurface conditions in the areas around the dry dock. His knowledge of these conditions goes to helping a factfinder understand the effect of the pile driving on the subsurface materials. His testimony focuses upon the cause of soil subsidence, an area in which he has extensive training and experience in his capacity as a geotechnical engineer. Accordingly, Garbin is qualified.

2. Reliability

Next, Defendants argue that “Garbin’s testimony lacks scientific basis or support and therefore is not reliable under *Daubert*.” Doc. 139 at 11. Defendants set out three specific grounds in seeking to preclude his testimony as unreliable. First, they argue that Garbin “lacks data and reliable sources to conclude that pile driving by Defendants caused any damage at the dry dock.” Doc. 139 at 12. Next, they argue that he “lacks any scientific basis for his opinions that pile driving caused cracks in the dry dock to increase or caused the amount of mud infiltrating the dry dock to increase.” *Id.* at 17. Finally, they contend that Garbin’s conclusion that Defendants’ should have recommended vibration monitoring is unreliable “because there is

no admissible evidence that there were any significant vibrations at the dry dock caused by pile driving.” *Id.* at 18. In response, Rhoads argues that there is sufficient evidence to support Garbin’s conclusions such that they are reliable under *Daubert*. We consider each of Defendants’ arguments in turn.

a. Whether Garbin “lacks data and reliable sources to conclude that pile driving caused any damage at the dry dock”

Defendants first argue that Garbin “lacks data and reliable sources to conclude that pile driving caused any damage at the dry dock.” In support of this argument, Defendants rely on the absence of vibration monitoring data regarding pile driving that occurred on the west side of the dock, and the minimal amount of vibration monitoring data regarding pile driving on the east side of the dock. They contend that without this data Garbin cannot reliably conclude that vibrations from pile driving reached, and therefore caused damage to, the dry dock. *Id.* at 15. They thus argue that Garbin’s conclusions are merely speculative. *Id.* at 14. Additionally, they contend that the scientific literature upon which Garbin relies in support of his conclusions is distinguishable from the circumstances of this case.

We have reviewed Garbin’s expert report and conclude that Defendants’ allegations that it lacks sufficient support are unfounded. Defendants arguments are predicated on the supposed lack of “vibration monitoring data” to support Garbin’s conclusions. They aver that without actual, hard data collected during the pile driving activities, Garbin cannot reliably conclude that vibrations were strong enough to reach the dry dock with enough energy to have caused damage. Essentially, Defendants ask us to preclude this testimony because there is no literal, contemporaneous proof that it is correct. However, *Daubert* does not require actual proof for an expert’s testimony to be reliable. To the contrary, “a *Daubert* reliability assessment does not test

whether the expert's testimony 'has the best foundation, or even whether the opinion is supported by the best methodology or unassailable research.'" *Scalia v. E. Penn Mfg. Co.*, 2020 WL 5409164, at *5 (E.D. Pa. Sept. 9, 2020) (quoting *Karlo*, 849 F.3d at 81). Rather, "[t]he standard for reliability is not that high," and it is satisfied so long as the expert has "good grounds." *Karlo*, 849 F.3d at 81 (internal citation and quotations omitted).

Here, Garbin has "good grounds" for his conclusions. As Rhoads highlights and as Defendants tacitly acknowledge, there was in fact vibration monitoring performed during the pile driving on the east side of the dry dock. *See* Doc. 145 at 8; Doc. 139 at 12. Garbin considered this vibration monitoring data in his report, writing that "[v]ibration monitoring was done during east side pile driving only and shows that low frequency vibrations from pile driving over 1,000 feet away reached the dry dock and therefore the soils adjacent to it." Doc. 145-2 at 1 ("Garbin Rep."). While no vibration monitoring was performed during west side pile driving, Garbin considered that pile driving on the west side was substantially closer to the dry dock, only 160 feet away, than it was on the east side, 1,000 feet or more away. *Id.* Additionally, Garbin considered the results of a published, peer-reviewed case study that found that vibrations from pile driving could have reached "as far away as 1,300 feet to cause unacceptable [soil] settlement." *Id.* at 1–2. Based on the foregoing, Garbin concluded that vibrations from the pile driving reached the dry dock.

Next, Garbin considered several "soil investigations, both geotechnical and geophysical, [that were] completed for [the dry dock] site and surrounding sites." These studies "identified sensitive soils in the vicinity of [the dry dock] that are prone to liquefaction," meaning that they "are also susceptible to vibration-induced settlement." *Id.* at 1. Further, Garbin considered vibration monitoring data regarding the strength of vibrations that occurred during pile driving.

He also reviewed data from the pile driving logs concerning the frequency and strength of the pile driving. Based on this information, he approximated the strength of the vibrations reaching the area of the dry dock, and considered peer-reviewed literature and guidance from the Federal Highway Administration concerning the level at which vibrations from pile driving can cause soil settlement. *Id.* at 3. Based on the vulnerability of the “pockets of particularly vibration-sensitive material . . . on both sides of [the dry dock],” the strength of the pile driving vibrations, and the temporal relationship between the pile driving activities and subsidence formation, Garbin concluded that the “aggregate effect” of the vibrations was to cause subsidence that resulted in damage to the dry dock, Building 669, and the crane rail. *Id.* at 1, 6, 7, and 8.

While we accept that there is limited data regarding vibration that occurred during the pile driving, it was permissible for Garbin to extrapolate from the data that does exist. Indeed, “trained experts commonly extrapolate from existing data,” and it is acceptable for them to do so, provided that there is not “too great an analytical gap” between the data and the opinion proffered. *General Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997). Here, there is no such gap. Using his training and experience, he extrapolated from vibration monitoring data of the relevant site, pile driving records, peer-reviewed scientific literature, and published federal safety guidance. Therefore, it cannot be said that his opinion is based simply on “subjective belief or unsupported speculation.” *Kannankeril*, 128 F.3d at 806. Still, we acknowledge that Garbin’s methodology may be subject to differing interpretations. For example, we accept that, as Defendants’ point out, his report did not address potential alternative causes of the subsidence (*e.g.*, “truck traffic, the operation of heavy machinery or recent earthquakes”). Doc. 139 at 16. However, considering the directive that “the reliability requirement should not be applied too strictly,” *see Holbrook v. Lykes Bros. S.S. Co., Inc.*, 80 F.3d 777, 784 (3d Cir. 1995), we find that

Garbin's methodology constitutes "good grounds" for his opinion such that it should be tested by the adversary process. Indeed, as *Daubert* instructs, "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence." 509 U.S., at 596.

b. Whether Garbin "lacks any scientific basis for his opinions that pile driving caused cracks in the dry dock . . . or the amount of mud infiltrating [it] to increase"

Next, Defendants aver that Garbin "lacks any scientific basis" to conclude that their pile driving activities caused cracks in the dry dock to increase or the amount of mud infiltrating the dry dock to increase. Defendants' sole argument on this point is that Garbin's conclusion is unreliable because it is not based on actual measurements of the size of the cracking or amount of mud in the dry dock but rather is based on the observations of Rhoads' Director of Operations Bob Orbaugh. Doc. 139 at 17–18. Defendants discount Orbaugh's observations as "hearsay statements by a layperson who is employed by the Plaintiff." *Id.* at 18. They therefore argue that without "objective data . . . there is no way to make a before-and-after causation determination." *Id.* In response, Rhoads argues that Orbaugh's observations are "not hearsay by a random person" but rather is "sworn testimony by a fact witness with responsibilities that align with the issues Garbin is assessing." Doc. 145 at 15. Rhoads therefore argues that Garbin's conclusions regarding the increase in cracking and mud infiltration is based on sound evidence, and that any doubt regarding the same should be resolved by a factfinder, not precluded from evidence entirely. (*Id.*)

The parties' dispute on this point comes down to a straightforward disagreement as to the quality of the evidence underpinning Garbin's conclusion. Defendants argue that Garbin's

testimony cannot be reliable unless it is supported by before-and-after measurements of the size of the cracking and amount of mud infiltration. Rhoads argues that Garbin's reliance on the observations of an employee as to the change in cracking and mud infiltration is sufficient.

In deciding this question, we again note that "[t]he test of admissibility is not whether a particular scientific opinion has the best foundation, or even whether the opinion is supported by the best methodology or unassailable research." *TMI*, 193 F.3d at 665. We further observe that "[g]enerally, 'an expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed.' Fed.R.Evid. 703. An expert need not base his opinion on first-hand knowledge, and in fact can rely on observations made by others as well as their own expertise." *Corner Pocket, Inc. v. Travelers Ins.*, 2013 WL 3993967, at *6 (W.D. Pa. Aug. 5, 2013) (citation in original) (citing *Daubert*, 509 U.S. at 592). As one district court in our circuit has explained, "[t]he Court finds no reason to reject [the expert's] testimony merely because she relied on the observations of lay observers as to matters within the lay observer's competency and personal knowledge." *McHugh v. Jackson*, 2010 WL 744125, at *7 n.13 (D.N.J. Mar. 2, 2010). Further, the Third Circuit has made clear that, "[a]n expert is . . . permitted to base his opinion on a particular version of disputed facts and the weight to be accorded to that opinion is for the jury." *Walker v. Gordon*, 46 Fed. App'x. 691, 695 (3d Cir. 2002).

Here, Garbin relied on the testimony of Rhoads' then-Director of Operations, in which he "report[ed] a substantial increase in the amount of mud (silt) accumulating in [the dry dock] that began after the west side subsidence occurred, and that the water pumps used to keep [the dry dock] dry had to be switched from intermittent to continuous operation." Garbin Rep. at 2. Orbaugh testified that he was responsible for maintenance activities including "mud removal" and overseeing the soil piping system. Orbaugh Dep. at 23:12-17. He further testified that, as

part of his job position, he was “on site every day,” *id.* at 86:20-21, and that the amount of mud infiltrating the dry dock “increased considerably” following the pile driving activities. *Id.* at 75:4-8. Clearly, the amount of soil piping and mud accumulation in the dry dock is within Orbaugh’s “competency and personal knowledge,” and it was permissible for Garbin to consider this testimony in combination with the other data he reviewed and his knowledge and experience. *See McHugh*, 2010 WL 744125, at *7.

It is of course the case that actual measurements of the cracking and amount of mud accumulation would be preferable to Orbaugh’s observations. However, neither party has alleged that such measurements exist from before the pile driving occurred. Thus, it appears that the observations of those familiar with the cracking and mud accumulation before and after the pile driving may well be the best evidence available. Further, as noted above, it is permissible for experts to “rely on observations made by others,” *Corner Pocket, Inc.*, 2013 WL 3993967, at *6, including the observations of lay observers as to matters within the lay observer’s competency and personal knowledge.” *McHugh*, 2010 WL 744125, at *7 n.13. In these circumstances, we conclude that Garbin’s opinion regarding increased cracking and mud accumulation rests on sufficiently “good grounds” such that “it should be tested by the adversary process—competing expert testimony and active cross-examination—rather than excluded from jurors’ scrutiny.” *Mitchell*, 365 F.3d at 234.

**c. Whether “Garbin should be precluded from testifying that
vibration monitoring . . . should have been recommended because
there is no admissible evidence [of] significant vibration”**

Finally, Defendants contend that Garbin should be precluded from testifying that “TranSystems and/or Shoreline should have recommended that the Navy perform vibration

monitoring and that Triton should have recommended more expansive vibration monitoring than what was required in the Naval contracts.” Doc. 139 at 18. Defendants argue that he should be precluded from testifying as such unless he first establishes that “vibration monitoring would have recorded both the requisite frequency and intensity of vibrations from pile driving to reasonably be considered as capable of causing damage to [the dry dock].” *Id.* at 19. They argue that he has not reliably done so because he allegedly “lack[s] . . . any scientific or empirical testing or data to support [his] opinion that pile driving caused damage to the dry dock.” *Id.* Essentially, Defendants argue that without proving that more expansive vibration monitoring would have been effective, Garbin cannot opine that it should have been completed. Without such evidence, Defendants aver that his opinion is “tethered to his personal beliefs instead of being moored to the factual record.”

In response, Rhoads argues that, contrary to Defendants’ assertions, there *is* evidence supporting Garbin’s opinion that vibrations from the pile driving reached the dry dock. Given that the alleged lack of evidence is the basis for Defendants’ argument on this point, Rhoads contends that the existence of the evidence means their argument must fail. Further, Rhoads argues that Daubert does not require Garbin to have conducted “actual testing” to render his opinion reliable, and that Defendants’ concern regarding the “lack of testing is an area for cross examination.” Doc. 145 at 17.

We find that Garbin’s opinion as to whether Defendants should have recommended vibration monitoring is reliable. First, we have discussed at length above that Garbin has “good grounds” for his opinion that vibrations from the pile driving reached the dry dock. Therefore, Defendants’ argument that Garbin should be precluded from testifying that vibration monitoring should have been performed must fail to the extent it is predicated solely on an alleged lack of

evidence that vibrations would have reached the dry dock. Moreover, even setting aside the question of whether vibrations reached the dry dock, we find that Garbin has “good grounds” for his opinion that more expansive vibration monitoring should have been recommended. In support of this opinion, Garbin considered the Federal Highway Administration’s “Design and Construction of Driven Pile Foundations” publication, which “warns that the distance [for continual vibration monitoring] should be increased to 500 feet for ‘older structures, structures or utilities in poor condition, or highly vibration sensitive equipment.’” Garbin Rep. at 7 (quoting *Design and Construction of Driven Pile Foundations*, Pub. No. FHWA-NHI-16-009, FED. HIGHWAY ADMIN. (2017)). In light of this guidance, Garbin further considered the “age, condition and sensitivity of the structures and utilities near the work area,” in concluding that “TranSystems, Shoreline, and Triton had an obligation to . . . complete . . . continual vibration monitoring.” *Id.* Garbin’s opinion is thus based upon more than what Defendants characterize as his subjective beliefs or conjecture. We therefore conclude, in accordance with the liberal admissibility standards embodied in Fed.R.Evid. 702, that Garbin has “good grounds” for his opinion which could be seriously tested by the adversary process.

3. Fit

Finally, Defendants challenge whether Garbin’s testimony fits the question the fact finder is asked to consider. Their argument on this point is limited to Garbin’s testimony regarding “practical refusal.” They argue essentially that testimony regarding practical refusal is irrelevant and therefore does not “fit.” Accordingly, we first provide a brief discussion of practical refusal and Garbin’s opinion regarding it.

Practical refusal is “a condition where the pile being driven cannot be advanced further with reasonable, safe effort.” Garbin Rep. at 4. It occurs at “the point where the pile being driven

provides increasing resistance to advancement due to the density of the strata in which it is being used.” Doc. 139 at 21. In his report, Garbin discussed practical refusal at length and opined that Defendants should have established “practical refusal criteria” for their projects. Practical refusal criteria are standards that reflect the number of hammer blows required to drive a pile a given distance into the soil.¹ See Garbin Rep. at 4. Where a pile has been driven sufficiently deep into the soil such that it requires an excessive number of blows to move it a small distance deeper, practical refusal has been reached. *Id.* The precise standards for defining practical refusal may vary for each individual project, but there are “several sources typically referenced as industry standards.” *Id.* When practical refusal is reached, “pile driving should [be] stopped to avoid damage and safety issues.” *Id.*

Here, Garbin opines that Defendants should have established and adhered to practical refusal criteria. He explained that the hammers that Defendants were using to drive piles came with manufacturer-specified practical refusal criteria, and that Defendants drove piles beyond the accepted safe point established by those criteria, resulting in what he refers to as “hard driving.” *Id.* at 5.

Defendants argue that Garbin should be precluded from offering this testimony in that “practical refusal criteria are intended to protect the safety of the workers, as well as the machinery” but “have absolutely no relation to managing vibrations from pile driving.” Doc. 139 at 21. Defendants rely on Garbin’s deposition testimony for the proposition that practical refusal criteria do not bear on potential damage to the area surrounding the pile driving. Specifically, Garbin was asked “whether or not [practical refusal] recommendations are made because of

¹ For example, in a given project, practical refusal criteria may establish that practical refusal occurs where pile driving requires “4 to 5 blows for 0.25 inches of penetration.” Garbin Rep. at 4.

potential damage to the hammer as opposed to the area around where the pile hammer is being used.” In response, he stated that there are two reasons for practical refusal criteria: “the first is to protect the safety and welfare of the people on the site doing the work,” and the second is to avoid “damage [to] the equipment or the pile.” Doc. 139 at 22 (citing Garbin Dep. at 52:18-53:15). Based on this testimony, Defendants argue that “by his own admission, Garbin confirm[ed] that practical refusal criteria are related only to protecting the safety of the workers . . . [and] the hammer and equipment.” *Id.* at 23. They thus contend that practical refusal criteria “have no bearing on vibrations into the surrounding area” and that “there is no connection between [Garbin’s] opinions on practical refusal and the alleged damages at issue.” *Id.* at 23–24.

In response, Rhoads argues that in addition to worker and equipment protection, practical refusal criteria bear on vibrations and soil subsidence resulting from the pile driving. In support, Rhoads references a passage from Garbin’s rebuttal report in which he explained that “the fuel setting on the pile driving hammer is typically increased once hard driving is encountered . . . , so the energy transferred to pile and soil also increases. Repeated, high energy hammer impacts certainly affected the surrounding soils negatively” Doc. 145 at 22 (quoting Garbin Rebuttal Report at 2, Doc. 145-9 at 3). Rhoads therefore seeks to “connect” practical refusal criteria to the damages at issue in this action by explaining that increased pile driving force is required when practical refusal is exceeded, which impacts the surrounding soil.

We acknowledge Garbin’s testimony that the practical refusal concept may focus upon equipment damage and worker safety, but that does not necessarily preclude its consideration here. In answering the question of whether his testimony on this topic “fits,” we first observe that fit is essentially “a question of relevance” and that Fed.R.Evid. 702 “has a liberal policy of admissibility” for testimony that “has the potential for assisting the trier of fact.” *Schiff*, 602 F.3d

at 172. The “fit” standard “is not that high, but is higher than bare relevance.” *Id.* (citation omitted). At the outset, we accept Defendants’ argument that practical refusal criteria are not relevant to a factual dispute in this case to the extent they are solely meant to protect workers and pile driving equipment. We further acknowledge Garbin’s deposition testimony that practical refusal criteria have only two purposes: to protect workers, and to prevent damage to equipment. However, we also observe that in his report, Garbin opined that “pile driving over [the practical refusal] limit is considered excessive and damage to the equipment, the piles, *and/or the surroundings* may result.” Garbin Rep. at 5 (emphasis added). Therefore, to the extent that Garbin opines that exceeding practical refusal criteria poses a risk to areas surrounding the pile driving activity, that testimony has the potential to assist the trier of fact.

Taken together, we conclude, in the exercise of our “broad discretion,” that Garbin’s testimony regarding practical refusal criteria is not precluded to the extent that he opines that exceeding such criteria poses a risk to the soil and surrounding areas. We find that this testimony could well assist the jury in understanding the evidence in this case and determining facts at issue. Accordingly, we decline to grant Defendants’ motion as to Garbin’s testimony.

C. Defendants’ motion to preclude David Wilshaw (Civ. No. 15-921, Doc. 141)

Defendants’ next seek to preclude Rhoads’ other causation expert, David Wilshaw. (Civ. No. 15-921, Doc. 141.) Like Garbin, Wilshaw’s report concludes that vibrations from Defendants’ pile driving activities resulted in the subsidence that occurred on both the west and east sides of the dry dock, causing damage to the dry dock and Building 669. Doc. 146-2 at 45 (“Wilshaw Rep.”). Defendants present arguments as to why Wilshaw’s testimony should be precluded, all of which appear to go to the reliability of his opinion. Here, we address

Defendants' arguments in turn. Inasmuch as Wilshaw and Garbin are both causation experts for Plaintiff, we have already resolved above several of the issues raised here.

1. Whether “Wilshaw’s opinion that vibration from pile driving was the/a cause of the subsidence . . . must be precluded”

Defendants first contend that Wilshaw’s opinion that vibrations from pile driving were “the cause of the subsidence that occurred on the west and east sides of the dry dock clearly fails the reliability requirement . . . for one simple and undeniable reason: *Neither Wilshaw nor any other expert retained by Rhoads* performed any vibration testing or monitoring to record *both* the frequency and intensity (particle velocity) of the actual vibrations that did or even could have reached the areas of the dry dock that subsided from any pile driving” Doc. 141-2 at 7–8 (emphasis in original). Defendants further argue that, given the lack of vibration monitoring data, Wilshaw’s opinion is based only on a single case study that is distinguishable from the circumstances of this case. *Id.* at 10–11. They conclude that “without any actual vibration monitoring or testing or mathematical calculations whatsoever underpinning [his] opinions that the pile driving . . . caused the subsidence . . . , Defendants have no substantive avenue in which to challenge his opinion on the merits.” *Id.* at 12.

In response, Rhoads argues that “Wilshaw’s opinions are not flawed,” as “[h]e inspected the site, directed and observed Cone Penetration Testing, and reviewed relevant data and records.” Doc. 146 at 8. Rhoads further contends that “Defendants are trying to impose a requirement of actual vibration monitoring” but that “[t]here is no such requirement.” *Id.* It disputes Defendants’ assertion that Wilshaw’s opinion is “without empirical testing and measurable data,” explaining that “Wilshaw’s observation (through direct testing) of the presence of soft soils at the depth at which [Defendant’s expert] estimated the pile tips and his

experience and training that piled foundations are driven to a hard bearing point is empirical testing.” *Id.* at 4–5.

We have reviewed Wilshaw’s report and find that the methodology underpinning his opinion that vibrations from Defendants’ pile driving activities were a cause of the subsidence is sufficiently reliable such that it will not be precluded. Defendants seem to argue that there is only one reliable method by which an expert in this case could conclude that Defendants’ pile driving activities caused the damage to the dry dock and Building 699, and that is to have performed “vibration testing or monitoring . . . of the actual vibrations that did or even could have reached the areas of the dry dock that subsided.” Doc. 141-2 at 8. However, as Rhoads points out, conducting such testing after the fact is a methodology not without limitations. Doc. 146 at 3 (“[V]ibration testing or monitoring after the subsidence occurred . . . is a costly exercise in futility because the soils have already been compromised.”). Moreover, whether a better methodology exists is not the test for reliability under *Daubert*. See, e.g., *Dalton v. McCourt Elec. LLC*, 112 F. Supp. 3d 320, 329 (E.D. Pa. 2015) (“Even if conducting a particular test may have rendered the opinion “more” reliable, that does not mean that without it, the opinion is unreliable.”). Rather, the standard for reliability is satisfied so long as the expert has “good grounds.” *Karlo*, 849 F.3d at 81.

Here, Wilshaw directed “deep Cone Penetration Test[ing]” in the areas adjacent to the dry dock. This testing measured the “shear wave velocity” of soil in the area to “create a layered profile of the ground,” and thereby determine the characteristics of the soil within. See Wilshaw Rep. at 29; Wilshaw Dep. at 75:12-13. Wilshaw’s report explains that the results of this testing showed the “presence of very weak buried soil deposit (river silt),” which has a “high susceptibility to liquefaction,” that were “underlain by very hard and dense sandy Trenton Gravel

soils.” Wilshaw Rep. at 1–2. Wilshaw explained in his deposition that the Trenton Gravel “is a very dense material with very high shear wave velocity” that “transmit[s] energy for a long distance very quickly,” and therefore “when piles are driven into that very hard layer[,] that energy doesn’t dissipate when it passes through that layer.” Wilshaw also considered pile driving data, including the location, number, and size of the piles and the depth to which they were driven. Wilshaw Rep. at 1–2, 41. Wilshaw then used his training and experience to apply accepted scientific principles of “wave propagation theory” to this data. Wilshaw Rep. at 35–39. Additionally, he reviewed the findings of published, peer-reviewed studies of the impact of pile driving vibrations on soils to inform his analysis. Wilshaw Rep. at 39–40. He concluded, in light of the “spatial evidence”—including the location of the weak soil susceptible to liquefaction and the dense soil capable of transmitting vibrations over longer distances, as well as the depth of the piles—and application of wave propagation theory principles, that “repetitive vibration caused by driving pies into the Trenton Gravel led to [the] susceptible silt layer either liquefying or collapsing into internal void spaces.” Wilshaw Rep. at 2.

We accept that Defendants have raised legitimate questions regarding Wilshaw’s conclusions. However, “Rule 702 mandates a policy of liberal admissibility.” *Paoli*, 35 F.3d at 741. Indeed, “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.” *Daubert*, 509 U.S. at 596. To that end, we observe that the Third Circuit has upheld trial court decisions to admit expert testimony simply “[b]ecause the record contains *some* factual basis—albeit shaky—for [the] testimony.” *Stecyk v. Bell Helicopter Textron, Inc.*, 295 F.3d 408, 414, 415 n.3 (3d Cir. 2002) (emphasis in original). Here, there is undoubtedly a factual basis for Wilshaw’s opinion that pile driving caused the subsidence events

on the sides of the dry dock. As such, we find that he has “good enough grounds” such that his testimony is admissible. *See Dalton*, 112 F. Supp. 3d at 329.

2. Whether “Wilshaw’s opinion that the pile driving caused or exacerbated soil piping into the dry dock or caused damage to the dry dock or Building 669 must be precluded”

Defendants next argue that Wilshaw’s opinion that Defendants’ pile driving “caused or worsened cracks in the dry dock that accelerated the piping of soil into the dry dock” is unreliable. Doc. 142-2 at 13. Like their arguments in regard to Garbin’s similar conclusion, Defendants aver that Wilshaw’s opinion does not rest on strong enough grounds in that it is not based on actual before-and-after measurements of the size of cracking in the dry dock or amount of soil piping, but is instead based on the testimony of Rhoads employees as to these changes. (Doc. 141-2 at 13–14.) Defendants further argue that Wilshaw’s opinion is therefore based on nothing more than the testimony of the Rhoads employees and “his own intuition.” *Id.* at 15. In response, Rhoads argues that it is permissible for Wilshaw to have relied on the testimony of Rhoads employees with personal knowledge of the cracking and soil piping, particularly Bob Orbaugh, Rhoads’ former director of operations, who was responsible for overseeing maintenance including mud removal. Doc. 146 at 9–10. Rhoads therefore contends that the reliance on Orbaugh’s testimony and the lack of before-and-after measurements of the cracks or amount of mud infiltration “goes to weight, not admissibility.” *Id.*

For the same reasons that we have set out above with respect to Garbin’s testimony, we find that Wilshaw’s testimony regarding increased cracking and soil piping rests on sufficiently “good grounds.” That is, it is permissible for an expert to “rely on observations made by others as well as their own expertise,” *Corner Pocket, Inc.*, 2013 WL 3993967, at *6, and there is “no

reason to reject [an expert's] testimony merely because she relied on the observations of lay observers as to matters within the lay observer's competency and personal knowledge." *McHugh*, 2010 WL 744125, at *7 n.13. We have already concluded that the amount of soil piping and mud accumulation in the dry dock is within Orbaugh's "competency and personal knowledge." Accordingly, it was permissible for Wilshaw to consider it in combination with the other data he reviewed and his knowledge and experience. *See McHugh*, 2010 WL 744125, at *7; *see also Walker*, 46 Fed. App'x. 691, 695 ("An expert is . . . permitted to base his opinion on a particular version of disputed facts and the weight to be accorded to that opinion is for the jury.").

3. Whether "Wilshaw's opinion that the Defendants should have recommended vibration monitoring or more expansive vibration monitoring to the Navy should be precluded"

Defendants next contend that "Wilshaw's opinion that the Defendants should have recommended vibration monitoring or more expansive vibration monitoring to the Navy should be precluded." Doc. 141-2 at 16. However, Wilshaw has not offered the opinion Defendants seek to preclude. Indeed, while Defendants assert that Wilshaw opined that they should have recommended vibration monitoring "in his reports," they provide no citation as to where in his reports he is supposed to have offered this opinion. *Id.* Further, Rhoads clarifies in its response that only its other causation expert, "Dr. Garbin, not Mr. Wilshaw, opined about recommending vibration monitoring." Doc. 146 at 17; *see also id.* at 12. Moreover, our review of Wilshaw's reports and deposition testimony further confirmed that no opinions as to whether Defendants

should have recommended vibration monitoring are contained therein.² To the contrary, to the extent that whether Defendants “should have” recommended vibration monitoring bears on the standard of care, Wilshaw expressly stated that he does not intend to offer any such opinion:

Q: . . . I just wanted to be extremely clear, you are giving no opinion whatsoever as to the standard of care that should be employed while pile driving. Is that correct?

A: My opinions relate to the impacts of the pile driving, but in terms of the standard of care that a contractor should have during pile driving in regards to the piles, I’m not giving an opinion on that.

Wilshaw Dep. at 32:15-24.

Despite Rhoads’ repeated acknowledgements in its response that Wilshaw does not offer the opinion that Defendants seek to preclude, it nonetheless argues that “[i]t is also proper for Wilshaw to opine as to the reasonableness of Triton’s actions” in having performed vibration monitoring “only within 200 feet of the pier.” Doc. 146 at 14 n.18. However, we are simply unable to assess the reliability of an opinion that has not been offered. We thus conclude that Rhoads, as the proponent of the witness, has not met its burden to demonstrate the admissibility of the opinion by a preponderance of the evidence.³ Accordingly, Defendants’ motion is granted

² While we note that Wilshaw reviewed reports prepared by third parties that discuss recommendation of vibration monitoring, see Wilshaw Rep. at 16, 25, we observe that Wilshaw himself did not offer any opinions as to whether or what extent Defendants should have recommended vibration monitoring.

³ Additionally, we note that the omission of any opinion as to the recommendation of vibration monitoring from Wilshaw’s report is itself a sufficient basis upon which to preclude him, in the exercise of our discretion, from offering testimony to that effect. *See* Fed.R.Civ.P. 26(a)(2)(B)(i) (expert reports must contain “a complete statement of all opinions the witness will express and the basis and reasons for them”); *see also* Fed.R.Civ.P. 37(c)(1) (“If a party fails to provide information ... as required by Rule 26(a) ... the party is not allowed to use that information ... at a trial, unless the failure was substantially justified or is harmless.”).

on the narrow point that Wilshaw is precluded from offering an opinion that Defendants should have recommended vibration monitoring or expanded vibration monitoring by the Navy.⁴

4. Whether “Wilshaw’s opinions regarding the impact of [other phenomena] as potential contributing causes of subsidence must be precluded”

Defendants next seek to preclude “Wilshaw’s opinions regarding the impact of earthquakes, historical rainfall/storms or vibration from other sources such as construction equipment, truck traffic or crane operation as potential contributing causes of subsidence.” Doc. 141-2 at 19. Defendants contend that “[i]n his expert and rebuttal reports, Wilshaw purports to dispute the assertions of Defendants’ liability experts that earthquakes, increased rainfall (including Superstorm Sandy) and vibrations from the operation of construction equipment, heavy vehicle traffic and the use of the heavy cranes over the crane rails are potential causes of the subsidence at issue,” but that he failed to actually consider these causes or had no factual basis for ruling them out. *Id.* at 20. In response, Rhoads argues that Wilshaw’s opinions are reliable in that he measured groundwater conditions, which inform his opinions as to whether “historical rainfall/storms” contributed to the subsidence, and that he did not review earthquake or construction equipment data only because none exists. Doc. 146 at 19.

We first note that Wilshaw does not appear to have offered any opinion in his expert report as to whether these potential alternative causes actually impacted the subsidence. Further, we acknowledge that Defendants have again failed to provide any citation as to where in his

⁴ We note, however, that this determination does not necessarily foreclose the possibility that Wilshaw could be permitted to offer rebuttal testimony on this subject in the event that Defendants’ experts’ testimony opens the door to it, pursuant to Fed.R.Evid. 703. *See, e.g., Hill v. Reederei F. Laeisz G.M.B.H., Rostock*, 435 F.3d 404, 423 (3d Cir. 2006).

report Wilshaw is supposed to have offered these opinions, despite stating in their brief that he offered them “in his expert *and* rebuttal reports.” Doc. 141-2 at 19 (emphasis added). Our review of Wilshaw’s reports, however, concludes that he only addressed these alternative causes in his rebuttal report. *See* Wilshaw Rebuttal Rep. at 9–10.

Of the potential contributory causes Defendants contemplate in this motion, Wilshaw’s rebuttal report addressed “truck traffic and crane operations,” as well as “increased rainfall in 2011, the August 2011 Virginia Earthquake, [and] Hurricane Sandy in October 2012.” *Id.* With regard to the “truck traffic and crane operations” and the 2011 earthquake, Wilshaw merely opined that Defendants’ expert had insufficient data and information to conclude that either contributed to the subsidence. With regard to the impact of increased rainfall in 2011 and Hurricane Sandy in 2012, Wilshaw opined that “higher annual rainfall amounts will [not] significantly impact the groundwater regime at Dry Dock 2.” In support of this opinion, he discussed the tidal characteristics of the relevant area of the Delaware River, and he considered data about its groundwater table and soil profile. *Id.*

To the extent Defendants now seek to preclude his rebuttal testimony, we find that Wilshaw’s opinions as to whether Defendants’ experts had sufficient support for their conclusions are admissible and properly a subject for cross-examination. We further find that Wilshaw’s opinions as to the impact of rainfall and Hurricane Sandy rests on good grounds. Accordingly, his testimony on these subjects will not precluded.

**5. Whether “Wilshaw must be precluded from offering any opinion
as to the means and methods of pile driving”**

Finally, Defendants contend that Wilshaw must be precluded from testifying as to the “means and methods of pile driving or the standard of care associated therewith.” Doc. 141-2 at

20. They argue that “Wilshaw admits that he is not a pile driving expert.” *Id.* Rhoads’ *entire* response on this point is that “Mr. Wilshaw has not offered, and did not intend to offer, any opinion as to the means and method of pile driving. Accordingly, this section of Defendants’ motion is unnecessary.” Doc. 146 at 10. We observe that Wilshaw expressly confirmed in his deposition that he does not purport to offer an opinion as to the “means and methods of pile driving,” Wilshaw Dep. at 37:17-20, or to the “standard of care.” *Id.* at 32:14-24. Given the foregoing, Defendants’ motion on this point is granted as unopposed.

D. Rhoads’ motion to preclude Bryan Strohman (Civ. No. 17-266, Doc. 149)

We now turn to Rhoads’ motion to preclude Defendants’ expert Bryan Strohman of the Simpson Gumpertz & Heger firm (“SGH”). (Civ. No. 17-266, Doc. 149). Rhoads challenges only the reliability of Strohman’s opinion, not whether it “fits” or whether he is qualified to render it. Doc. 149-2 at 1. Specifically, Rhoads contends that Strohman lacks support for his opinion that other “potential contributors” exist that “possibly exacerbated and contributed to” the subsidence. *Id.* at 2–3 (citing Strohman Rep. at 142). These “potential contributors” include: “continuous inflow of water and soil, lack of maintenance, failure to perform regular inspections and repairs, increased rainfall, hurricane Sandy, the August 2011 earthquake in Virginia, waterline leaks, loading of the crane rail foundations, vibrations from the crane operation, and construction equipment operating on the ground surface above the crane rails. *Id.* Based on the alleged lack of support for Strohman’s proffered alternative causes, Rhoads moves to preclude any and all testimony by Strohman or any of his associates from SGH. *Id.* at 9. In response, Defendants argue that the portion of Strohman’s report with which Rhoads takes issue makes up only three pages of the 142-page report, and that narrowly focusing on a small portion of the report is not a basis on which to preclude it. Doc. 160 at 4–5. Further, they contend that

Strohman's opinions regarding various "potential contributors" are supported by sufficient evidence to be admissible. *Id.* at 5–7.

We have reviewed Strohman's report and the parties' briefing, and we conclude that Rhoads' arguments are without merit. Throughout its brief, Rhoads' overarching argument is that Strohman's opinion is unreliable because he "does not know if these 'potential contributors' *actually contributed* to the subsidence." Doc. 149-2 at 3 (emphasis added); *see also, e.g., id.* at 5, 7, 8. This argument, however, relies upon a mischaracterization or a misinterpretation of Strohman's opinion. Indeed, Strohman does not purport to opine that the "potential contributors" he discusses "actually contributed" to the subsidence. To be sure, Strohman's report is abundantly clear that his opinion is merely that the potential contributors "*possibly* exacerbated and contributed to the premature collapse of soil." Strohman Rep. at 142; *see also id.* at 133 ("[I]t is *possible* that other events, such as increased rainfall, the August 2011 Virginia Earthquake, Hurricane Sandy, and waterline leaks exacerbated and contributed to premature collapse of soil.") (emphasis added).

Despite Rhoads' assertion that Strohman's opinion is unreliable because he does not "know" that the potential contributors "actually contributed," Strohman does not need such knowledge or evidence of "actual contribution" to support his opinion of "possible contribution." Rhoads seems to argue that simply because Strohman opines that something is "possible," rather than "certain," his opinion is impermissibly speculative. *See* Doc. 171 at 7. But Strohman is not speculating at all as to what is merely *possible*. To the contrary, he has "good grounds" for his opinion that it is *possible* that other phenomena contributed to the subsidence. *Id.* at 133–35 (discussing the factual basis for his opinion that "it is *possible* that other events . . . contributed to [the subsidence]"); *id.* at 130–33 (discussing the factual basis for his opinion that a lack of

maintenance and failure to perform inspections and repairs “*likely* contributed to the . . . subsidence”).⁵

Here, Strohman has good grounds for his opinion that “potential contributors” exist. While his testimony may not be sufficient to prove that any of these “potential contributors” *actually* contributed to the subsidence, it is not the Defendants’ burden to prove causation. Rather, Strohman’s opinions as to the possibility of other contributing causes will undoubtedly assist the jury in evaluating Rhoads’ theory of causation and will be admitted for that purpose. *See Wolfe v. McNeil-PPC, Inc.*, 2011 WL 1673805, at *14 (E.D. Pa. May 4, 2011) (citing *Holbrook v. Lykes Bros. S.S. Co.*, 80 F.3d 777, 786 (3d Cir. 1996)) (“[W]here [the] defendant seeks to introduce evidence merely to cast doubt on the plaintiff’s theory of causation, the expert need not definitively rule out plaintiff’s theory for his testimony to be admitted.”) That Strohman only opines that these potential alternative causes “possibly” contributed to the subsidence, instead of “definitely” did so, is an area appropriate for cross-examination at trial.

E. Rhoads’ motion to preclude Bengt Fellenius (Civ. No. 17-266, Doc. 151)

Rhoads next moves to preclude Defendants TranSystems’ and Shoreline’s expert Bengt Fellenius “from providing expert testimony at trial on the impact, or role, of rainfall in the subsidence.” (Civ. No. 17-266, Doc. 151-2 at 12.) Rhoads challenges the reliability and fit of Fellenius’s opinion regarding rainfall, not his qualifications to proffer it. *Id.* at 1. Rhoads contends that his opinion “is not reliable because [he] has not identified the basis of his ‘analysis,’ an analysis that results in an improperly skewed result.” *Id.* at 1–2. Specifically,

⁵ We acknowledge that Strohman’s opinion regarding maintenance and repairs express a higher degree of likelihood than his opinions regarding other potential contributors. However, we nonetheless find that his opinion with regard to these causes similarly rests on good grounds in that he considered dry dock repair requirements, dry dock maintenance records, and deposition testimony of Rhoads employees. Strohman Rep. at 130–33.

Rhoads argues that Fellenius's "rainfall analysis" is unreliable in that it utilized a "five-year running average difference to the average rainfall," allegedly without "(a) defining what that is, (b) providing the raw data he used, (c) explaining how he performed his calculations, and (d) disclosing why he used a five-year average." *Id.* at 2, 5. Further, Rhoads briefly argues that Fellenius's opinion does not "fit" because his analysis allegedly "creates a skewed result" and will thus "only confuse, not assist the jury." *Id.* at 11.

In response, TranSystems and Shoreline argue that Fellenius's testimony is reliable in that it "scientifically explains why excessive rainfall saturating the soil could have accelerated the soil piping that led to the formation of the [subsidence]." Doc. 161 at 4. They further argue that Fellenius's report and testimony "explains . . . the relationship between rainfall/water accumulation on the migration of soils" and that "this explanation is based on a testable methodology" such that "Rhoads may cross-examine Fellenius on this issue." *Id.*

We have reviewed Fellenius's report and the deposition testimony the parties provided, and we are not persuaded by Rhoads' arguments. First, we observe that the import of his report is his opinion that pile driving did not cause the subsidence. Doc. 161-2 at 10–17 ("Fellenius Rep."). Rhoads does not challenge this most significant portion of his opinion, which upon our review, is supported by good grounds. Instead, Rhoads challenges only Fellenius's secondary opinion, that "[t]he depression and ground settlement are most likely a consequence of the increased flow of water in the ground due to rain and the associated increase of piping-erosion and soil migration." *See* Doc. 151-2 at 4–5 (quoting Fellenius Rep. at 18). Rhoads challenges this opinion in part based on the argument that "[a] 'most likely' opinion is also unreliable as speculative." (Doc. 172 at 4.) Rhoads is incorrect. Rather, experts commonly testify as to the "most likely" cause of some event, and it is permissible for them to do so long as that opinion

rests on “good grounds.” *See, e.g., Heller*, 167 F.3d at 154. This is particularly true in the scenario of defense causation experts proffered to counter a plaintiff’s causation theory. *See Holbrook*, 80 F.3d at 786; *see also St. Paul Fire & Marine Ins. Co.*, 2005 WL 1168380, at *11.

Here, Fellenius has good grounds for his opinions regarding the impact of rainfall. He considered rainfall data from the National Oceanic and Atmospheric Administration (“NOAA”) and modeled it as a five-year running average to determine that “[t]he rainfall in the years immediately before the depression appeared were considerably larger than over any similar period over the preceding 130 years.” Fellenius Rep. at 18. He then considered the relationship between increase rainfall, groundwater table levels, and soil migrations. *Id.* In doing so, he explained that increased rainfall “will result in higher than average groundwater table,” and that areas with “loose sand” soil are susceptible to subsidence in the event of an increased water table level. *Id.* He considered empirical data regarding the soil profile in the area of the subsidence and determined that it is susceptible to such subsidence. *Id.* at 5–9. Applying this empirical data to principles of geophysics, including the relationship between rainfall, water tables, and soil migration, he opined that “[t]he depression and ground settlement are most likely a consequence of the increased flow of water in the ground due to rain and the associated increase of piping-erosion and soil migration.” *Id.* at 18.

Rhoads’ challenges to Fellenius’s methodology are without merit. First, Rhoads argues that Fellenius did not define what a “five-year running average difference to the average rainfall” is, or “how it is calculated.” Doc. 151-2 at 5. This argument is unfounded. Fellenius’s report explains that the table he prepared shows the “five-year running average average difference to the average rainfall for 1880 through 2018 two years before and two years after each indicated year.” *Id.* at 3. We are unsure how Fellenius could be more clear about what his table represents.

It simply compares to the average yearly rainfall the five-year running average of rainfall for each year. *Id.* He calculated the five-year running average for each given year using the two years preceding and succeeding it. *Id.* If Rhoads is unclear as to what a “running average” is, that is certainly not a basis to preclude Fellenius’s testimony.

Further, Rhoads argues that Fellenius did not explain “why he calculated” a five-year running average of rainfall as opposed to simply considering the amount of rainfall in each individual year. Curiously, Rhoads also cites Fellenius’s deposition testimony in which he explains precisely why he used a running average:

Q: Okay. Now, you used a five-year running average. Why?

A: Because rainfall varies from year to year. When you have a period of a hundred years, and more here, you’d like to see a trend. And as you look at that trend, you have to average the data to eliminate the variations and changes that are not related to the – the trend. So doing a rounding average of the data, you can see that – the trend of more rainfall a few years, and less another couple of years, becomes very clear.

Q. Why pick a five-year running – I’m sorry.

A. That removes the peaks, more than anything, at the average.

Q. What is the significance to your analysis of this running average of rainfall?

A. It shows that the – when comparing to the average rainfall over this hundred-year period, there are a couple of years where you have more than other years and a couple of years where you have less. Some years it rains more. Other years it rains less. We know that. Now, when you’re running your [geo]metric averages like this, you’ll come out and see quite clearly which years had more rainfall than other years. And it shows that the last couple of years before – around – the last five years we had more rainfall than any other period of five years.

Doc. 151-2 at 5–6 (quoting Fellenius Dep. at 77:1–79:10).

Further, Fellenius explained in his report that “[t]he process will be slow and intermittent with occasionally a larger event occurring without a direct trigger is discerned [sic]. The loss of volume accumulates over time and is visible as ground settlement.” Fellenius Rep. at 18. Clearly,

and contrary to Rhoads' assertion, Fellenius has explained "why he calculated" a five-year running average.

We acknowledge Rhoads' arguments as to the alleged shortcomings of utilizing a running average rather than simply viewing each year individually. *See* Doc. 151-2 at 7–8. However, we observe that "[t]he test of admissibility is not whether a particular scientific opinion has the best foundation, or even whether the opinion is supported by the best methodology or unassailable research." *Karlo*, 849 F.3d at 81 (quoting *TMI*, 193 F.3d at 665); *see also Paoli*, 35 F.3d at 742 (explaining that there may be good grounds "even if the judge thinks that a scientist's methodology has some flaws such that if they had been corrected, the scientist would have reached a different result."). Here, we find that the alleged flaws Rhoads has identified do not warrant preclusion, as Fellenius's opinion rests on "good grounds."⁶

Finally, we also conclude that Fellenius's opinion satisfies the "fit" prong in that it will "help the trier of fact to understand the evidence or to determine a fact in issue." *TMI*, 193 F.3d at 663 (quoting Fed.R.Evid. 702(a)) (alterations omitted). Rhoads argues that Fellenius's opinion regarding the impact of rainfall does not fit in that his reliance on five-year running averages instead of individual annual rainfall "creates a skewed result" that will "only confuse, not assist the jury." Doc. 151-2 at 11. We disagree. We find that Fellenius's testimony on this subject will

⁶ We also note Rhoads' argument that Fellenius's opinion is unreliable because he "did not include the raw data" from NOAA used to assess the amount of rainfall and create the chart contained in his report. Rhoads has not cited any authority supporting the proposition that a failure to include underlying data, where the expert has provided a summary of it, is sufficient grounds for the preclusion of expert testimony. Rather, there are numerous less drastic remedies than preclusion available for this issue, by which TranSystems and Shoreline could provide the underlying data to Rhoads. However, we also note that Rhoads has apparently already obtained this data, as he references it in his brief in arguing that Fellenius's use of it is unreliable. Doc. 151-2 at 8.

aid the jury in understanding a fact at issue, namely, the cause of the subsidence.⁷ For the foregoing reasons, Rhoads' motion to preclude Fellenius's testimony is denied.

F. Rhoads' motion to preclude Benjamin Irwin (Civ. No. 17-266, Doc. 147)

Rhoads next moves to preclude the testimony Triton's expert Benjamin Irwin of the HAAG Engineering firm. (Civ. No. 17-266, Doc. 147-2.) Rhoads does not seek to preclude Irwin on the basis of any of the trilogy of restrictions under Fed.R.Evid. 702. Rather, it challenges Irwin's testimony based only on an alleged "failure to comply with [Fed.R.Civ.P.] 26." *Id.* at 1. Rhoads alleges that Irwin's testimony is noncompliant with Fed.R.Civ.P. 26 in that he "failed to include 'all' his opinions in his report," and he "changed his opinion, but waited to reveal that change until he appeared for deposition." *Id.* at 1–2. On these bases, Rhoads moves to preclude Irwin's testimony in its entirety. For the reasons that follow, this motion will be denied. We first set out the relevant Fed.R.Civ.P. 26 requirements and Fed.R.Civ.P. 37 provisions pursuant to which Rhoads argues for preclusion of Irwin's entire testimony.

First, Fed.R.Civ.P. 26(a)(2) requires disclosure of expert testimony, which "must be accompanied by a written report" that includes "a complete statement of all opinions the witness will express and the basis and reasons for them." Fed.R.Civ.P. 26(a)(2)(B)(i). That rule further provides that "[t]he parties must supplement these disclosures when required under Rule 26(e)."

⁷ To the extent that Rhoads also challenges the admissibility of this opinion under Fed.R.Evid. 403, we reject that argument as well. That rule permits the Court to exclude evidence "if its probative value is substantially outweighed by a danger of," *inter alia*, "confusing the issues [and] misleading the jury. Fed.R.Evid. 403. We find that Fellenius's testimony has high probative value and only a small risk of confusing the issues or misleading the jury. Rhoads seems to argue that the difference between a running average of rainfall and individual yearly rainfall is misleading to the jury. However, any confusion that might result from this distinction can easily be alleviated through effective cross-examination. *See, e.g., Mitchell*, 365 F.3d at 234 (reliable testimony "should be tested by the adversary process—competing expert testimony and active cross-examination—rather than excluded from jurors' scrutiny for fear that they will not grasp its complexities or satisfactorily weigh its inadequacies.").

Fed.R.Civ.P. 26(a)(2)(E). In turn, Fed.R.Civ.P. 26(e) requires supplementation “in a timely manner if the party learns that in some material respect the disclosure or response is incomplete or incorrect, and if the additional or corrective information has not otherwise been made known to the other parties during the discovery process or in writing.” Fed.R.Civ.P. 26(e)(1)(A). The “duty to supplement extends both to information included in the report and to information given during the expert’s deposition,” and “any additions or changes to this information must be disclosed by the time the party’s pretrial disclosures under Rule 26(a)(3) are due.” Fed.R.Civ.P. 26(e)(2).

Where a party fails to provide the required information or supplementation, Fed.R.Civ.P. 37(c) provides that the court may impose appropriate sanctions at its discretion, including exclusion of the evidence at trial, unless the failure “was substantially justified or is harmless.” Fed.R.Civ.P. 37(c)(1)(C). However, “[t]he exclusion of critical evidence is an extreme sanction, not normally to be imposed absent a showing of willful deception or flagrant disregard of a court order by the proponent of the evidence.” *Konstantopoulos v. Westvaco Corp.*, 112 F.3d 710, 719 (3d Cir. 1997). In determining whether exclusion of evidence is appropriate, we consider: “(1) the prejudice or surprise in fact of the party against whom the excluded witnesses would have testified or the excluded evidence would have been offered; (2) the ability of that party to cure the prejudice; (3) the extent to which allowing such witnesses or evidence would disrupt the orderly and efficient trial of the case or of other cases in the court; (4) any bad faith or willfulness in failing to comply with the court’s order; and (5) the importance of the excluded evidence.” *ZF Meritor, LLC v. Eaton Corp.*, 696 F.3d 254, 298 (3d. Cir. 2012) (internal citations and quotations omitted).

Here, Rhoads specifically takes issue with Irwin's opinion as to whether there was "foundation movement at Building 669." Doc. 147-2 at 4. As Rhoads points out, Irwin opined in his report that "[t]here was no credible scientific evidence of recent structural damage to Building 669 resulting from Triton's pile driving work," and he explained that part of the basis for this conclusion was that "[t]he deep foundation system of [Building 669] had not recently moved laterally westward toward the reported sinkhole repair location." Doc. 147-4 at 2–3 ("Irwin Rep."). However, at his deposition, Irwin opined differently, stating that there was in fact westward lateral movement of the grade beams and columns of Building 669. Irwin Dep. at 16:3–17:23. Irwin explained that he changed his opinion based on his preliminary review of "new information" that was only made available to him subsequent to the completion of his initial report. Irwin Dep. at 13:11–14:5. He further testified that his analysis of this new data was "not complete" but that it was ongoing. Irwin Dep. at 15:12–18:5. Rhoads contends that because Irwin's report is incomplete, it necessarily does not include "all" his opinions, as is required by Fed.R.Civ.P. 26(a)(2)(B)(i). Rhoads further argues that despite Irwin's ongoing analysis and change of opinion, "Triton's counsel has not served any additional or supplemental disclosure for Irwin," Doc. 147-2 at 6, and that doing so at this point would be untimely and in contravention of Fed.R.Civ.P. 26. *Id.* at 8. As a result, Rhoads argues that the appropriate sanction under Fed.R.Civ.P. 37 is preclusion of Irwin's testimony in its entirety. *Id.*

In response, Triton first argues that Rhoads' motion is untimely because it "cannot argue at this late juncture that [it] was unaware of Irwin's [role as an expert and the general subject matter of his testimony]." Doc. 159 at 4. Triton further argues that it is somehow improper for Rhoads to have "raised issues regarding the alleged new opinions of [Irwin] . . . [f]or the first time upon filing of these motion [sic]." *Id.* at 6. Next, Triton contends that Irwin did not offer

“new opinions at his deposition,” *id.* at 4, but rather that the opinions stated at his deposition “are contained within the four corners of his report,” such that the supplementation requirements of Fed.R.Civ.P. 26(e) are not invoked. *Id.* at 7. Alternatively, Triton argues that “should the court deem the opinions are new,” Irwin should nonetheless be permitted to testify because the “four factor test [for determining whether to] preclud[e] testimony for failure to comply with pre-trial requirements” weighs against preclusion. *Id.* at 7. Here, Triton argues that it is permissible for Irwin to testify beyond the scope of his report where he has “simply expanded” on the opinions in his report rather than offered entirely new ones. *Id.* at 8.

In resolving this motion, we first note that we are not persuaded by Triton’s argument that Rhoads’ motion to preclude Irwin is somehow untimely. To the contrary, Rhoads submitted this motion—a motion to preclude expert testimony—on the date that “motions to preclude or limit expert testimony” were due. Triton has not cited any authority for its position that Rhoads’ motion is untimely, nor is the Court aware of any authority supporting the proposition that the time period in which to file motions to preclude expert testimony is somehow a “late juncture” for such motions or is not the proper venue to raise “for the first time” issues regarding the experts opinion. Triton’s argument as to the timeliness of Rhoads’ motion is thus entirely without merit.

Next, we are not persuaded by Triton’s argument that Irwin’s changed opinion as to the lateral movement of Building 669’s foundation is not “new” and therefore does not invoke the supplementation requirements of Fed.R.Civ.P. 26(e). While the parties have dedicated significant space in their briefing to arguing as to whether Irwin expressed a “new” opinion or merely “expanded” on the opinions in his report, this semantic difference is ultimately inconsequential. Indeed, Fed.R.Civ.P. 26(e) requires supplementation “in a timely manner if the party learns that

in some material respect the disclosure or response is incomplete or incorrect.” The rule thus does not distinguish between expert opinions that are “new” or are simply “expansions” of prior opinions, as the parties seem to suggest. Here, additional data was made available to Irwin after the completion of his report. Doc. 159 at 4. Through his preliminary analysis of this new data, Irwin learned that his opinion that “[t]he deep foundation system of [Building 669] had not recently moved laterally westward” was incorrect. Further, he testified that, as of the time of his deposition, his analysis of this new data was “not complete” and was ongoing. Thus, regardless of whether his opinion stated in his deposition was “new,” Irwin’s discovery that the opinion stated in his report was incorrect and that his analysis was incomplete invokes Fed.R.Civ.P. 26(e).

Despite Irwin’s learning that one of the opinions in his report was incorrect and that his analysis was incomplete, Triton did not serve any supplemental disclosure, and in fact, as of the parties’ briefing on this motion, it still has not done so. However, with regard to Irwin’s changed opinion as to the foundation movement at Building 669, we note that the “inconsistency between his report and his deposition testimony . . . goes to the weight of the evidence” and therefore is not a basis for preclusion of his testimony on that subject. *Allstate Ins. Co. v. Anderson*, 2016 WL 2939506, at *6 (E.D. Pa. May 20, 2016), *as amended*, 2016 WL 2997675 (E.D. Pa. May 23, 2016). Further, while Triton did not provide a supplemental report of Irwin’s changed opinion, that information has now “otherwise been made known” to Rhoads through his deposition testimony. Fed.R.Civ.P. 26(e)(1)(A) (requiring supplementation “if the additional or corrective information has not otherwise been made known to the other parties during the discovery process or in writing”). Moreover, the new data upon which Irwin’s changed opinion is based is data that was collected by one of Rhoads’ experts. *See* Doc. 147-2 at 3–4. Given that Rhoads has been

made aware of Irwin's updated opinion and is familiar with the data underpinning it, it cannot be said that Rhoads will suffer prejudice or unfair surprise in allowing Irwin to testify on this subject. The inconsistency between his report and deposition testimony is thus an appropriate area for cross examination, but it does not warrant preclusion of his testimony.

However, while Irwin's changed opinion as to the movement of Building 669's foundation has been made known to Rhoads, the results of his incomplete analysis of the new data have not. Triton therefore had a duty to supplement its disclosure of Irwin's report, but it has not done so. Accordingly, imposition of sanctions pursuant to Fed.R.Civ.P. 37(c)(1) may be appropriate. In making this determination, we consider the factors prescribed by the Third Circuit and set out above. *See ZF Meritor, LLC*, 696 F.3d at 298.

First, Rhoads would be prejudiced if Irwin were permitted to testify regarding the results of his analysis of the new information because it was unable to depose him on the subject, as his analysis was "not complete" at the time of his deposition. Next, Rhoads' ability to cure that prejudice is significantly curtailed by the fact that Triton still has not submitted a supplemental report to give Rhoads notice of any change to Irwin's opinions. Further, the only way to cure this prejudice would be to reopen expert discovery to allow Rhoads to re-depose Irwin and to refile an updated motion to preclude his testimony if necessary. This cure would undoubtedly disrupt the orderly and efficient trial of the case, as expert discovery has been closed for more than five months. Next, while we will not speculate as to whether Triton's actions were borne of bad faith or willfulness, we note that Triton delayed in providing the new information to Irwin for his review, and that it has offered no explanation for its failure to promptly provide it to him.⁸

⁸ Rhoads asserts, and Triton does not dispute, that Triton was provided the relevant new data at least by October 8, 2020, when expert paper discovery concluded. However, Triton did not then provide to Irwin for his review until November 23, 2020, only one day prior to his scheduled

Finally, because Triton has not provided a supplemental report and Irwin was unable to testify to the outcome of his incomplete analysis at his deposition, we are unable to assess the potential importance of the information his analysis might produce.

Taken together, it is clear that these factors weigh in favor of precluding Irwin from testifying as to the portions of his analysis that were incomplete at the time of his deposition. However, these concerns are not present with regard to his report in its entirety or to the opinions he expressed at his deposition. Accordingly, Rhoads' requested relief—that Irwin be precluded from testifying entirely—is not warranted. Rather, any prejudice to Rhoads can be alleviated simply by limiting Irwin's trial testimony to scope of his report and deposition testimony. Accordingly, Irwin is precluded from testifying as to his analysis that remained incomplete at the time of his deposition. Otherwise, his testimony will be limited only to the degree that expert testimony is limited in the normal course.

G. Rhoads' motion to preclude John Vitzthum (Civ. No. 17-266, Doc. 144)

Rhoads next moves to preclude the testimony of Defendants' expert John Vitzthum of DM Consulting. (Civ. No. 17-266, Doc. 144-2.) Rhoads first argues that Vitzthum's testimony should be precluded in that Triton failed to comply with Fed.R.Civ.P. 26 and provide a complete and timely expert disclosure. *Id.* at 8. Rhoads further challenges Vitzthum's qualifications to proffer the opinions contained in his report and the reliability of his opinions. For the reasons that follow, we conclude that Triton's failure to comply with Fed.R.Civ.P. 26 disclosure requirement warrants preclusion of Vitzthum's testimony. We first set out the relevant Fed.R.Civ.P. 26(a) requirements and determine that Defendants failed to comply with them. We

deposition. This delay resulted in Triton rescheduling Irwin's deposition. Triton has offered no explanation or justification for this delay.

then set out the relevant Fed.R.Civ.P. 37(c) provisions and determine that exclusion of Vitzthum's testimony is warranted.

1. Defendants' expert disclosures are noncompliant with Fed.R.Civ.P. 26(a)

As set out above, Fed.R.Civ.P. 26(a)(2) requires disclosure of expert testimony and mandates that "this disclosure must be accompanied by a written report" that includes:

- (i) a complete statement of all opinions the witness will express and the basis and reasons for them;
- (ii) the facts or data considered by the witness in forming them;
- (iii) any exhibits that will be used to summarize or support them;
- (iv) the witness's qualifications, including a list of all publications authored in the previous 10 years;
- (v) a list of all other cases in which, during the previous 4 years, the witness testified as an expert at trial or by deposition; and
- (vi) a statement of the compensation to be paid for the study and testimony in the case.

Fed.R.Civ.P. 26(a)(2)(B)(i)–(vi). Further, "[a] party must make these disclosures at the times and in the sequence that the court orders." Fed.R.Civ.P. 26(a)(2)(D).

Here, our scheduling order stated that "Defendants' expert reports regarding damages are due no later than September 15, 2020." Doc. 118. Accordingly, the disclosures that those reports must accompany were due on that same date. Fed.R.Civ.P.(a)(2)(D). Rhoads alleges that, as of the date motions in limine were due and the date it submitted this motion, Triton had failed to provide an expert disclosure that is compliant with Fed.R.Civ.P. 26(a)(2) requirements. Doc. 144-2 at 8. Rhoads contends that at that time, the only expert disclosure produced was Vitzthum's three-page expert report (Doc. 144-4) ("Vitzthum Rep."), which, "in direct contravention" of Fed.R.Civ.P. 26 fails to include: "Vitzthum's qualifications," "a list of

publications authored in prior 10 years,” “a list of all cases (in prior 4 years) in which he testified (at trial or deposition) as an expert,” and “a statement of his compensation for his ‘report’ and testimony in this case.” *Id.*

In response, Defendants do not dispute Rhoads’ assertions as to Triton’s failure to provide expert disclosures. Instead, they merely contend that “Plaintiff’s argument is now moot as the required 26(B) [sic] disclosures have now been provided.” Doc. 165 at 8. Defendants’ attachments to their brief includes a letter to Rhoads’ counsel that states that it contains the required Fed.R.Civ.P. 26 disclosures and is dated April 8, 2021, the same date that Defendants served their response in opposition to Rhoads’ motion. Doc. 165-3. In arguing that this subsequent disclosure was timely, Defendants misconstrue the Federal Rules and cite “Rule 26 (2)(D)(i)” [sic] for the proposition that expert “disclosure must be provided at least 90 days prior to the date set for trial or for the case to be ready for trial.” *Id.* In doing so, Defendants ignore the qualifying phrase from Fed.R.Civ.P. 26(a)(2)(D), which states that “[a] party must make these disclosures at the times and in the sequence that the court orders.” Fed.R.Civ.P. 26(a)(2)(D). Indeed, subsection (i) of that Rule, cited by Defendants, is only applicable “[a]bsent a stipulation or a court order” governing the “times” and “sequence” of expert disclosures. *Id.* Here, our scheduling order set a deadline for Defendants’ damages expert reports of September 15, 2020. Doc. 118. Expert disclosures were thus due on that date, and not on the default date provided by the Federal Rules in the event a court does not set a deadline. Accordingly, Defendants’ April 8, 2021 disclosure was untimely, and only Triton’s original disclosure, the inadequacy of which Defendants do not dispute, was timely.

Further, even setting aside its untimeliness, Defendants April 8, 2021 disclosure still fails to comply with Fed.R.Civ.P. 26(a)(2). As Rhoads points out in its reply, this disclosure still does

not contain any information regarding Vitzthum's compensation. Further, the list of cases in which the witness has testified provides virtually no identifying information. The entire list is as follows:

Year	Law Office	Case
2018	Lawrence Shea	Voyager

Doc. 165-3. The publications list Defendants provided is similarly inadequate. It states the titles of two publications, with the only additional identifying information being the year one publication was "last updated," and a conference at which the other publication was presented. *Id.*

Taken together, it is clear that Defendants' disclosures are not compliant with Fed.R.Civ.P. 26(a). Indeed, they have not disputed their only timely disclosure, Vitzthum's three-page expert report propounded on September 14, 2020, is noncompliant. Further, their subsequent disclosure, which they contend satisfies Fed.R.Civ.P. 26(a) is untimely and inadequate. Having determined that their disclosures are noncompliant, we now turn to determine the appropriate remedy.

2. Exclusion of Vitzthum's testimony is appropriate

Fed.R.Civ.P. 37 provides that "[i]f a party fails to provide information or identify a witness as required by Rule 26(a) or (e), the party is not allowed to use that information or witness to supply evidence on a motion, at a hearing, or at a trial, unless the failure was substantially justified or is harmless." Fed.R.Civ.P. 37(c)(1). However, "[t]he exclusion of critical evidence is an extreme sanction, not normally to be imposed absent a showing of willful deception or flagrant disregard of a court order by the proponent of the evidence." *Konstantopoulos v. Westvaco Corp.*, 112 F.3d 710, 719 (3d Cir. 1997). As discussed above, the

Third Circuit has set out five factors that trial courts may consider in determining whether exclusion of evidence or a witness is appropriate: “(1) the prejudice or surprise in fact of the party against whom the excluded witnesses would have testified or the excluded evidence would have been offered; (2) the ability of that party to cure the prejudice; (3) the extent to which allowing such witnesses or evidence would disrupt the orderly and efficient trial of the case or of other cases in the court; (4) any bad faith or willfulness in failing to comply with the court’s order; and (5) the importance of the excluded evidence.” *ZF Meritor*, 696 F.3d at 298 (internal citations and quotations omitted). We are further mindful that “[t]he importance of the evidence is often the most significant factor,” *id.*, and that “[t]he non-producing party shoulders the burden of proving substantial justification for its conduct or that the failure to produce was harmless.” *Klatch-Maynard v. Sugarloaf Twp.*, 2011 WL 2006424, at *2 (M.D. Pa. May 23, 2011) (internal quotations and citations omitted). In applying these factors, we conclude that preclusion of Vitzthum’s testimony is appropriate.

First, we find that Rhoads has been prejudiced by Defendants’ failure to provide a timely expert disclosure. This prejudice primarily flows from Defendants’ deprivation of Rhoads’ opportunity to prepare a comprehensive Daubert motion to preclude Vitzthum’s testimony. That is, Rhoads was unable to prepare a challenge to Vitzthum’s qualifications because it did not receive any disclosure of Vitzthum’s qualifications until after the deadline to submit motions in limine. Further, as Rhoads points out, it is also unable to fully prepare a challenge to the reliability of Vitzthum’s opinions because it “still does not have the basis for his opinions.” Doc. 167 at 3. Indeed, while Vitzthum’s original report listed four “referenced documents used in this analysis,” Defendants’ in their response identified several other forms of data upon which

Vitzthum's report relies but that were not disclosed prior to deadline for motions in limine. Doc. 165 at 5–6.

Further, Rhoads is unable to cure this prejudice at this stage, as expert discovery closed on January 15, 2021 (Doc. 127), and the deadline for submitting motions to preclude or limit expert testimony was March 8, 2021 (Doc. 129). On this point, Defendants argue that Rhoads has foregone its opportunity to cure this prejudice in that it “elected not to notice the deposition of Vitzthum” and did not “raise any issue regarding Vitzthum’s credentials or experience until the filing of this motion.” Doc. 165 at 6. First, we note that “the filing of this motion,” a motion to preclude expert testimony, is in fact the proper time for Rhoads to have raised “issues regarding Vitzthum’s credentials or experience.” Next, we are not persuaded that its decision not to depose Vitzthum weighs against Rhoads. Indeed, Defendants have an affirmative obligation to provide compliant expert disclosures. To the contrary, Rhoads has no affirmative obligation to depose Defendants’ witnesses, and it is certainly has no obligation to utilize its depositions as a substitute for Defendants’ compliant disclosures or to remedy Defendants’ failure to provide them. Rather, as Rhoads asserts, the only way to cure this prejudice at this stage would be to reopen expert discovery, which has been closed for over five months, require Defendants to provide a compliant expert disclosure, permit Rhoads to depose Vitzthum and to submit a new *Daubert* motion. However, Defendants have not so much as requested the opportunity to pursue any cure, and instead rest only on their attempt to direct blame at Rhoads’ decision not to depose Vitzthum. We are therefore unwilling to pursue the cumbersome, costly, and time-consuming cure that would be necessary at stage, particularly considering the circumstance that Defendants have not even requested it.

Further, we find that Defendants' apathetic response to Rhoads' concerns regarding their expert disclosures raises legitimate questions with respect to whether there was "any bad faith or willfulness" in failing to comply. That is, Defendants did not offer any reason whatsoever, let alone any "substantial justification," for their failure to timely provide a compliant expert disclosure. Rather, they merely attempt to argue that their failure was harmless by shifting the blame to Rhoads for opting not to depose Vitzthum. Moreover, the untimely disclosure that they provided in response to Rhoads' motion appears to have been haphazardly and inattentively assembled. Even after being put on notice of the obvious shortcomings of their initial disclosure, that subsequent disclosure fails to provide basic information expressly required by Fed.R.Civ.P. 26(a), and it includes only the barest descriptions of Vitzthum's past testimony and publications, with insufficient details to enable to Rhoads to actually identify that information. Defendants also delayed in providing that subsequent disclosure for one month following Rhoads' motion that identified the inadequacies in their previous motion, and they have not even requested the opportunity to cure any of these deficiencies. At best, Defendants' conduct evinces a lack of regard for the seriousness of their obligation to comply with the Federal Rules. At worst, their failure to provide a compliant disclosure even after being put on notice of the inadequacies in their initial disclosure, along with their delay in providing the subsequent disclosure and failure to provide any explanation whatsoever for these deficiencies, gives rise to an inference of willfulness or bad faith.

Finally, we turn to "the most significant factor," the importance of the evidence to be excluded. We have reviewed Vitzthum's cursory expert report, and we find that his "opinions" are of relatively low importance and that Defendants will likely be able to introduce much of this same evidence with fact witnesses and/or through cross examination of Rhoads' witnesses.

Vitzthum is proffered as a damages expert who will rebut the claims of Rhoads' damages experts. Defendants characterize his opinions as follows. They assert that he "explain[s] the requirements relating to dry-docking of government ships" and "conclude[s] after reviewing the history of the subject dry dock, coupled with his extensive industry knowledge . . . that Dry Dock 2 would currently require extensive . . . repairs prior to . . . being able to pass the referenced forms of certification." Doc. 165 at 13–14. Defendants further assert that he "concludes that from his review of materials little to no maintenance had been performed at the dry dock, or maintenance records kept, for almost 30 years." *Id.* at 14. He further "opines that Rhoads['] relative inexperience," along with "other factors"—such as the dry dock's "physical limitations . . . configuration and available water depths," and geographic location—would "impact their ability to win bids." *Id.* Finally, Defendants state that he "opines based upon the data provided that the dock has not had any form of certification since [1994]." *Id.* at 15.

We initially note that expert testimony on issues of causation and liability generally are more consequential in this case than such testimony as it relates to damages. We also acknowledge that Vitzthum's report does not include any actual damages calculations to rebut Rhoads' experts. Rather, his opinions seem to serve only to cast doubt generally over Rhoads' damages experts' calculations. Moreover, we observe that several of the "opinions" Vitzthum offers are not opinions at all but are simply statements of disputed facts. For example, it is not an "opinion" whether the dry dock "had any form of certification" since 1994. It either did have certifications or it did not. Nor is it an "opinion" whether maintenance was performed on the dry dock or whether maintenance records exist. Accordingly, Defendants may introduce this evidence at trial without Vitzthum's testimony. Further, Vitzthum's opinions as to Rhoads' inability to win government bids is directly aimed at rebutting Rhoads' damages experts'

testimony. As such, Defendants will still be able to introduce the information underlying those opinions through effective cross-examination of Rhoads' witnesses. Taken together, we conclude that Vitzthum's testimony, as a damages rebuttal expert, is of relatively low importance, as Defendants will likely still be able to introduce much of the information to which he would testify, and to challenge Rhoads' damages experts, through fact witnesses and effective cross examination. Finally, and significantly, we observe that Defendants provided no argument in response to Rhoads' motion to exclude Vitzthum as to the importance or significance of his testimony.

Given the foregoing analysis, we find that the five factors set out by the Third Circuit weigh in favor of excluding Vitzthum's testimony. We further observe that Defendants seem to have not taken seriously their burden under the Federal Rules to prove that their failure to comply was substantially justified or is harmless. Indeed, they neglected entirely to provide any explanation or justification for their failure, and they argued that it was harmless only by attempting to shift the blame to Rhoads for not deposing Vitzthum. Accordingly, while we acknowledge that "exclusion of expert testimony is a harsh sanction," *Kennedy v. Norfolk S. Ry. Co.*, 2008 WL 975063, at *3 (W.D. Pa. Apr. 9, 2008), we find that it is appropriate under the circumstances here.⁹

⁹ Further, even if we were not to exclude Vitzthum's testimony pursuant to Fed.R.Civ.P. 37(c) for failure to comply with Fed.R.Civ.P. 26(a), we would nonetheless preclude it pursuant to Fed.R.Civ.P. 702 as unreliable. Indeed, while "[t]he standard for reliability is not that high," expert testimony must still be supported by "good grounds." *Karlo*, 849 F.3d at 81. Further, while the facts and assumptions underlying an expert's opinion are generally issues for cross examination and not preclusion, the opinions must still have at least "some factual basis," even if it is "shaky." *Stecyk*, 295 F.3d at 415 n.3; *see also, e.g., Guy Chem. Co., Inc. v. Romaco Inc.*, 2009 WL 10690008, at *3 (W.D. Pa. Oct. 26, 2009) ("Expert's testimony must be accompanied by a sufficient factual foundation before it can be submitted to the jury.") (quoting *Gumbs v. Int'l Harvester, Inc.*, 718 F.2d 88, 98 (3d Cir. 1983)). Here, Vitzthum summarizes his opinion as follows: "It is my opinion, within a reasonable degree of professional certainty, that Rhoads'

H. Rhoads' motion to preclude James Schofield (Civ. No. 17-266, Doc. 148)

Rhoads next moves to preclude TranSystems' expert James Schofield, who "was proffered to opine on the age, maintenance, and repair of the dry dock." (Civ. No. 17-266, Doc. 148-2 at 1.) He concluded that the condition of the dry dock was consistent with its age and that it had suffered from a lack of maintenance since the 1970s. Schofield Rep. at 22. He further concluded that Rhoads failed to appreciate the degree to which its facilities and the surrounding soils required restoration and that its maintenance plans were inadequate to address the long-term deterioration. *Id.* at 23. Rhoads challenges Schofield's qualifications to proffer opinions on these subjects, the reliability of his opinions, and their fit. For the reasons that follow, Rhoads' motion will be denied.

1. Qualification

Rhoads first challenges Schofield's qualifications to opine as to the age, maintenance, and state of repair of the dry dock. Doc. 148-2 at 5. Rhoads' argument on this point is predicated entirely on Schofield's deposition testimony that he does not consider himself to be "an expert on dry dock repair and maintenance" and that he has never "done any projects involving repair or maintenance of dry docks." *Id.* at 3, 5 (quoting Schofield Dep. at 48:23–49:16). Based on those statements, Rhoads argues that "the proffered expert testimony 'falls outside a witness's

claim that it potentially lost government contracts and revenue from 2013 to present, when the dry dock has not had any form of certification since 1993, is unreasonable." Vitzthum Rep. at 2. There is no factual support in the record for the proposition that "the dry dock has not had any form of certification since 1993." To the contrary, Rhoads has provided certifications from 2012 (Doc. 144-6), 2015 (Doc. 144-7), 2017 (Doc. 144-8), and 2020 (Doc. 144-9). This contradiction with record evidence is not merely the sort of "conflicting evidence that is not a basis to exclude an expert's testimony." See *Giterman v. Pocono Med. Ctr.*, 2019 WL 1452936, at *7 (M.D. Pa. Apr. 2, 2019). Rather, Vitzthum's inaccurate assertion that Rhoads' dry dock had no certifications after 1993 finds no support in the record, yet it is central to his conclusions. Under these circumstances, it cannot be said that Vitzthum's opinion has a sufficient factual basis to be reliable.

expertise” and should therefore be excluded. *Id.* at 5 (quoting *Ferris v. Pennsylvania Fed'n Bhd. of Maint. of Way Emps.*, 153 F. Supp. 2d 736, 743 (E.D. Pa. 2001)). In response, TranSystems contends that it is not necessary for Schofield to have “specific expertise on one particular topic,” but rather that “*Daubert's* qualification standard is liberal and flexible.” Doc. 163 at 4. TranSystems argues that he satisfies this standard based on his academic credentials and professional experience, “the majority [of which] has involved projects in or around the United States Navy and naval bases.” *Id.* at 3.

We find that Schofield is qualified, under the liberal standards for qualification. Indeed, while an expert must possess “specialized expertise” to be qualified, this requirement has been “interpreted liberally,” with the Third Circuit holding that “a broad range of knowledge, skills, and training qualify an expert.” *Paoli*, 35 F.3d at 741. In fact, “it is an abuse of discretion to exclude testimony simply because . . . the proposed expert does not have the specialization that the court considers most appropriate.” *Holbrook*, 80 F.3d at 782. Despite its liberal construction of the qualification requirement, the Third Circuit has “not pursued a policy of qualifying *any* proffered witness as an expert.” *Waldorf v. Shuta*, 142 F.3d 601, 625 (3d Cir. 1998). Rather, “at a minimum, a proffered expert witness must possess skill or knowledge greater than the average layman.” *Id.* (internal citations, quotations, and alterations omitted). “If the expert meets liberal minimum qualifications, then the level of the expert’s expertise goes to credibility and weight, not admissibility.” *Kannankeril*, 128 F.3d at 809. However, we also acknowledge that “[a]n expert may be generally qualified but may lack qualifications to testify outside his area of expertise.” *Calhoun v. Yamaha Motor Corp., U.S.A.*, 350 F.3d 316, 322 (3d Cir. 2003). With these principles in mind, we “consider both academic training and practical experience to determine if the expert has more knowledge than the average lay person on the subject.” *In re:*

Tylenol (Acetaminophen) Mktg., Sales Pracs., & Prod. Liab. Litig., 2016 WL 4056026, at *2 (E.D. Pa. July 27, 2016) (citations and quotations omitted).

Schofield has extensive relevant academic training, including a Bachelor of Science in Ocean Engineering, a Master of Science in Construction Management, and a Master of Engineering in Civil Engineering. (Doc. 163-4 at 1) (“Schofield CV”). In addition to his academic training, he has held several job positions within the Navy in engineering and construction management roles, including as Resident Officer in Charge of Construction at the Southwest Division Naval Facilities Engineering Command in San Diego, CA and later at the Naval Academy in Annapolis, MD. *Id.* at 2. He testified at his deposition that his responsibilities at the latter included overseeing waterfront construction and renovation projects, including repairs of failing seawalls associated with “loss of fill” from incidents of subsidence. Schofield Dep. at 37:14–25. He further testified that his role as Ocean Construction Division Contracting Officer at the Naval Facilities Engineering Service Center included “leading a team that was advertising and awarding overarching contracts for . . . Navy [ocean construction] work all over the world.” *Id.* at 30:9–15.

Clearly, Schofield has extensive training and experience in engineering and construction management, particularly with regard to waterfront projects, as well as strong familiarity with naval maintenance and repair standards. Despite this expertise, Rhoads argues that his testimony should be precluded because he is admittedly not an expert specifically in “dry dock maintenance and repair.” However, we find that Rhoads’ characterization of the required expertise is too narrow in light of broad, liberal standard under *Daubert*. See, e.g., *Johnson v. SJP Mgmt. LLC*, 2009 WL 367539, at *8 (E.D. Pa. Feb. 12, 2009) (“[Expert’s] expertise in the field . . . is

sufficient to permit him to offer an expert opinion, notwithstanding his lack of experience with the specific technology at issue here.”); *see also Kannankeril*, 128 F.3d at 809.

Further, we find that Rhoads’ reliance on Schofield’s statement that he does not consider himself a “dry dock repair and maintenance” expert is misplaced.¹⁰ The Third Circuit addressed a similar circumstance in *Pineda*. There, the Court found abuse of discretion where the district court “determined that the only permissible expert was a ‘warnings expert,’” and consequently precluded an expert based on his own testimony “that he did not offer himself as a warnings expert.” *Pineda*, 520 F.3d at 244–45. In reversing the district court’s ruling, the Third Circuit stated that “[l]ooking beyond this single statement, we find that [the expert’s] formal qualifications are unassailable,” and that the expert’s general expertise “was more than sufficient to satisfy Rule 702’s substantive qualification requirement.” *Id.* at 245. Following this guidance, we have similarly “look[ed] beyond” Schofield’s “single statement” that he does not consider himself an expert on dry dock repair and maintenance. In doing so, we find that he “possess[es] skill or knowledge greater than average layman” in the area of his testimony as a result of his academic training in engineering and construction management, as well as his practical experience overseeing waterfront construction projects and his familiarity with naval repair and maintenance standards. Accordingly, we conclude that Schofield “meets liberal minimum qualifications.” *Kannankeril*, 128 F.3d at 809. As such, concern as to “the level of [his] expertise goes to credibility and weight, not admissibility.” *Id.*

2. Reliability

¹⁰ Further, to the extent that Rhoads argues that Schofield’s statements as to the areas of his own expertise are determinative, he has also included on his CV that he is an expert in “Construction Management,” “Underwater Construction and Inspection,” “Building Science,” “Diving and Underwater Inspection,” and “Property Maintenance.” Schofield CV at 1. All of these areas of expertise are related to his inspection of Rhoads’ facilities at issue.

Rhoads further challenges Schofield's testimony based on its reliability. Rhoads' sole argument on this point is that Schofield's "process was simply reviewing documents and concluding there was no maintenance or repair at the dry dock" and that he "has not identified any other methodology utilized to form his opinions." Doc. 148-2 at 6. We are not persuaded by Rhoads' argument.

First, we note that Rhoads has mischaracterized Schofield's methodology as relying solely on document review. Indeed, he performed a site inspection of the dry dock and Rhoads' other facilities. Schofield Rep. at 7. In his report, he stated that he observed: "major repairs to Wharf 4B and 4A had been completed," "Ongoing flow of water and silt from the dock walls and floor," "vegetative materials flourishing on the dock walls," "steady seepage and flow of water accumulating," and "multiple and various pavements and utility cuts in the areas surrounding Dry Dock 2, consistent with the 100 year age of the facility." *Id.*

Further, we note that Rhoads has not offered any explanation as to why Schofield's document review does not constitute "good grounds" for his opinions. To the contrary, our review finds that his document review and site inspection constitute a sufficient factual basis to support his opinions. Here, Schofield opines as to the current condition of the dry dock, the extent to which it has been maintained in the years preceding and following Rhoads leasing it, the extent to which repairs would be needed to restore it to operational status, and whether Rhoads had performed those repairs since taking over the dry dock. Schofield Rep. at 22–23. In reaching those opinions, Schofield reviewed documentation and testimony produced in this case concerning the "construction, maintenance, and repair history" of the dry dock to understand the degree to which it had been maintained in the years and decades prior to Rhoads leasing it. *Id.* at 10–16. Further, he reviewed the lease terms between Rhoads and the City, which included

provisions regarding Rhoads' maintenance budget for the dry dock and other facilities. *Id.* at 19. He also reviewed documentation regarding the standards for dry dock maintenance as set out by the Navy. *Id.* at 16–18. He concluded, in essence, that the current state of the dry dock is consistent with its more than 100 year age, that it had been inadequately maintained since the 1970s, and that Rhoads only budgeted for routine maintenance while more extensive “‘capital improvements’ of the civil/structural state of the drydock” were required to restore it to an operational status.

Given the nature of Schofield's opinions, we find that his extensive review of discovery materials, along with his site inspection and his experience and training, are “good grounds” for his testimony. Indeed, as set out above, there is undoubtedly at least “*some* factual basis” for his testimony. *Stecyk*, 295 F.3d at 415 n.3 (holding that expert testimony was admissible “[b]ecause the record contains *some* factual basis—albeit shaky—for [the] testimony”).

3. Fit

Finally, Rhoads challenges the “fit” of Schofield's testimony. Rhoads argues that his testimony will not “aid the jury in resolving a factual dispute” because he “based his opinion on merely reviewing documents produced in this litigation.” Doc. 148-2 at 6. Rhoads thus contends that his testimony is unnecessary in that “[t]he jury can review and understand those documents with the assistance of a fact witness.” We are not persuaded. First, we note again that Rhoads' argument ignores Schofield's site inspection, at which he made observations that are central to his report. Moreover, we reject Rhoads' contention that an expert opinion that is based on discovery materials is inherently unhelpful to a jury. Rather, expert testimony “fits” where it “[helps] the trier of fact to understand the evidence.” *TMI*, 193 F.3d at 663 (quoting Fed.R.Evid. 702(a)). Here, we find that Schofield's testimony will assist the jury in understanding the

evidence as it relates to Rhoads' damages claims. Accordingly, his testimony is admissible and Rhoads' motion is denied.

I. Rhoads' motion to preclude Wesley Grover (Civ. No. 17-266, Doc. 150)

Rhoads next moves to preclude Defendants' damages expert Wesley Grover of FTI Consulting, Inc. (Civ. No. 17-266, Doc. 150.) Defendants retained Grover "to assist in the evaluation of the financial claims by [Rhoads]." Doc. 164-1 at 4 ("Grover Rep."). He concluded that five categories of damages calculations Rhoads' experts provided—Lost Income, Extra Expenses, Future Extra Expenses, Dry Dock 2 and Crane Repair Costs, and Building 669 Repair and Replacement Costs—are "overstated," "speculative," and/or "unsupported" and therefore "should not be relied upon." Rhoads challenges the reliability and fit of Grover's opinions, not his qualifications to proffer them. Doc. 150-2 at 3. For the reasons that follow, we find that Grover's opinions are sufficiently reliable and will assist the jury.

1. Reliability

Rhoads contends that Grover's opinions are unreliable in that his "process was simply the selective review of documents and portions of Rhoads' experts" and that "he has not . . . identified any other methodology utilized to form his opinions." Doc. 150-2 at 3–4. In support, Rhoads asserts that "[t]he unreliability of his opinion is illustrated in his testimony about: (a) lost revenue; (b) extra expenses related to rental lifts; and (c) crane rail repair costs." *Id.* at 4. First, Rhoads argues that Grover's analysis regarding lost revenue was "restrictive." *Id.* Specifically, Rhoads contends that Grover's assertion that "three major players in the [dry docking] industry" were "eroding" its market share and that was inadequately researched, as were his opinions as to Rhoads' bids for government contracts. *Id.* at 4–6. Rhoads further argues that Grover's analyses

as to “rental lift expenses” and “crane rail repair costs” are insufficient in that he performed only a “limited review of documents.” *Id.* at 7–8.

In response, Defendants argue that Grover’s methodology is reliable in that he “reviewed voluminous materials in this matter, including all transcripts, discovery, documents, and performed his own research (cite any articles) [sic] and then came to his conclusions based upon his years of specialized training, education, and experience.” Doc. 164 at 7. Defendants further contend that Grover’s opinions “are centered on longstanding engineering and economic principles.” *Id.* More specifically, Defendants argue that his consideration of “the factual history of the dry dock . . . including its construction and maintenance history, as well as the financial losses calculated by Plaintiffs’ expert,” coupled with his “education, training and relevant work experience on construction matters,” renders his opinion reliable. *Id.* at 12.

We have reviewed Grover’s report and find that his opinions are reliable. We first observe that Grover is proffered only as a damages rebuttal expert. His report does not contain any independent damages calculations or otherwise provide any alternative damages figures to contradict those of Rhoads’ experts. Rather, he merely opines that Rhoads’ expert’s damages calculations are flawed in that they are based on assumptions that are “contrary to industry averages or trends” and are “unsupported” or “overstated.” Grover Rep. at 38. In reaching these conclusions, Grover first considered the maintenance history of the dry dock and the surrounding area in the Navy Yard and reviewed deposition testimony and documentation produced in this case. *Id.* at 6–8. He then extensively reviewed the reports of Rhoads’ damages experts and provided a thorough discussion of their methodologies with regard to each specific subset of damages Rhoads’ experts identified. Finally, drawing on his experience calculating lost income and construction repair costs and his knowledge and research of relevant industry trends, he

identified a number of alleged shortcomings in Rhoads' damages expert's opinions. For example, with regard to Rhoads' experts projected profit margins, Grover pointed out that their analysis utilized a constant figure to calculate projected profits, but that doing so was "contrary to . . . the industry's reported . . . decline in profit margin from 2015 to 2020." *Id.* at 21.

We find that this methodology constitutes "good grounds" for Grover's opinions, considering the purpose for which they have been proffered. That is, it is permissible for Grover, as a rebuttal expert, to have reviewed Rhoads' experts reports and to have applied his experience and training to opine as to whether those reports are sound. *See, e.g., In re Front Loading Washing Mach. Class Action Litig.*, 2013 WL 3466821, at *4 (D.N.J. July 10, 2013). Indeed, there are "circumstances where one's training and experience will provide an adequate foundation to admit an opinion and furnish the necessary reliability to allow a jury to consider it." *Oddi*, 234 F.3d at 158. Here, Rhoads has not challenged whether Grover's training and experience is sufficient, and our review finds that it is extensive. Rather, Rhoads' challenges to Grover's opinions are primarily centered on assertions that his review of Rhoads' experts reports was too "restrictive" or too "limited." Undoubtedly, Rhoads has highlighted areas where Grover's opinions may have been bolstered by more expansive review. *See, e.g., Doc. 150-2* at 6–7 (discussing that Grover based his opinions regarding Rhoads' government contract bids only on his document review and did not "call any clients to ask for bid evaluations"). But these challenges go to the weight of Grover's opinions, not their admissibility. Indeed, the extent of Grover's review can be probed on cross-examination.

2. Fit

In addition to its reliability, Rhoads challenges the "fit" of Grover's testimony. Specifically, Rhoads argues that "Grover does not add any value" in that "[h]e merely acts like

an attorney conducting cross-examination of an expert witness.” Doc. 150-2 at 10. Rhoads further contends that “[t]he issues [Grover] raised to rebut Rhoads’ damages can be addressed through cross-examination of Rhoads’ experts. Using a rebuttal expert to replace (or supplement) cross-examination of Rhoads’ expert will confuse, rather than assist, the jury.” *Id.* In response, Defendants argue that Grover’s opinions “fit” in that “they will assist the jury in understanding [the] complex financial loss claims arising out of the operation of a dry dock.” Doc. 164 at 13.

We are not persuaded by Rhoads’ arguments. First, we note that Rhoads has not cited any authority for the proposition that rebuttal testimony that raises “issues [that] . . . can be addressed through cross-examination” of the adverse witness is inadmissible, nor is the Court aware of any such authority. To the contrary, the Third Circuit has made clear that it views “competing expert testimony” as going hand-in-hand with “active cross examination” in making up the “adversary process” through which expert testimony should be tested. *Mitchell*, 365 F.3d at 234 (3d Cir. 2004) (“As long as an expert’s scientific testimony rests upon good grounds it should be tested by the adversary process—competing expert testimony and active cross-examination—rather than excluded from jurors’ scrutiny for fear that they will not grasp its complexities or satisfactorily weigh its inadequacies.”) (internal citation and quotations omitted). Further, we are not persuaded that rebuttal evidence will “confuse, rather than assist the jury” simply because it concerns subject matter that may also arise on cross-examination. We thus reject Rhoads’ invitation to exclude rebuttal expert testimony because it bears on issues that may also be the subject of cross-examination. Instead, we find that Grover’s testimony will assist the jury in evaluating the complexities of Rhoads’ experts’ damages calculations.¹¹ *See, e.g., Schiff*, 602

¹¹ We note that, had the issue properly been raised, we may have been inclined to preclude certain of Grover’s opinions, namely, those that may amount to legal conclusions. Indeed, “[t]he Federal Rules do not permit experts to testify as to legal conclusions.” *Transportes Aereos*

F.3d at 173 (explaining that the fit requirement “is a question of relevance, and Rule 702 has a liberal policy of admissibility if [expert testimony] has the potential for assisting the trier of fact.”) (internal citations and quotations omitted). For that reason, we conclude that Grover’s testimony “fits” and Rhoads’ motion to preclude it is denied.

J. Defendants’ motion to preclude Greg Cowhey (Civ. No. 15-921, Doc. 143)

Defendants next seek to preclude Rhoads’ damages expert Greg Cowhey. (Civ. No. 15-921, Doc. 143.) Rhoads retained Cowhey to perform “an analysis of the lost business income and extra expenses suffered by Rhoads as a result of the actions of the Defendants.” (Doc. 147-2 at 1) (“Cowhey Rep.”). He concluded that Rhoads’ amount of lost business income ranges from \$12,652,287 to \$22,090,248, and that the amount of extra expenses is \$2,594,387. *Id.* at 2. Defendants challenge Cowhey’s testimony based on his qualifications, its reliability, and its fit.

Pegaso, S.A. de C.V. v. Bell Helicopter Textron, Inc., 623 F. Supp. 2d 518, 533 (D. Del. 2009) (citing *Highway Materials, Inc. v. Whitmarsh Tp., Montgomery County, Pa.*, 2004 WL 2220974, at *19 (E.D. Pa. Oct. 4, 2004)). Here, however, Grover has stated that Rhoads “ha[d] the responsibility to mitigate its damages” but that it “has not performed its duty to mitigate its damages.” Grover Rep. at 38, 39. Grover also opined that, “unless the Plaintiffs can prove to the trier of fact that the pile driving activity caused the sinkholes to form, then absent such proof, there are no damages for Lost Business Income attributable to the Defendants.” *Id.* at 9. However, the issue as to whether these particular opinions should be precluded as impermissible legal conclusions was not properly raised in the motion before us. While Rhoads complained in its initial brief that Grover “acts like an attorney conducting cross-examination of an expert witness,” it did not argue that any of his opinions should be precluded as legal conclusions. Doc. 150-2 at 10. Further, although Rhoads in its reply brief highlighted Grover’s opinions as to the duty to mitigate damages and the burden to prove liability, it still did not argue that these opinions should be precluded as legal conclusions. Moreover, even if Rhoads had clearly articulated such a challenge, it was impermissible for it to do so in the first instance in its reply brief, as doing so would deprive Defendants’ opportunity to respond. Of course, our resolution of this motion is without prejudice to Rhoads’ ability to object at trial should Grover attempt to opine as to a legal conclusion. *See Holman Enterprises v. Fid. & Guar. Ins. Co.*, 563 F. Supp. 2d 467, 472 (D.N.J. 2008) (“The district court must limit expert testimony so as to not allow experts to opine on ‘what the law required’ or ‘testify as to the governing law.’”) (quoting *United States v. Leo*, 941 F.2d 181, 196–97 (3d Cir.1991)).

For the reasons that follow, Defendants' motion is denied. Cowhey will not be precluded from testifying.

1. Qualifications

Defendants argue that "Cowhey offers several opinions which are beyond the scope of his qualifications as an accountant." Doc. 143 at 22. Specifically, Defendants argue that "Cowhey is not an engineer and not qualified to offer opinions as to the cause of the sinkholes," and that he "has no experience and is not qualified to offer opinions regarding the management of a marine business or dry dock." *Id.* at 23, 24. In response, Rhoads contends that "Defendants know full well that Mr. Cowhey is not offering such opinions, yet they raise this non-issue." (Doc. 147 at 2.)

Our review confirms that Rhoads has accurately characterized this challenge to Cowhey's qualifications as a "non-issue." First, it is clear that Cowhey does not purport to offer any opinions as to causation, despite Defendants assertions otherwise. To be sure, his damages report is predicated on the assumption that Rhoads will prevail on issues of liability, including causation. He expressly states as much on the first page of his report: "RSM was asked to assume Plaintiffs successfully establish liability against Defendants." Cowhey Rep. at 1. Operating under that assumption, however, is not tantamount to offering an opinion as to causation. In fact, "[a]ll damages expert opinions are dependent . . . on the assumption that liability has been proven." *Dorman Prod., Inc. v. Paccar, Inc.*, 201 F. Supp. 3d 663, 690 (E.D. Pa. 2016), *as amended* (Oct. 17, 2016).

Next, we find that Defendants argument as to Cowhey's lack of experience in managing a marine business or dry dock is without merit. Defendants contend that Cowhey is not qualified to testify because "he does not consider himself an expert on whether or not a dry dock meets

certification,” “[h]e is not an expert in appraising the condition of a building,” “[h]e is not an expert concerning proper maintenance for a dry dock,” and “he has no experience being a Navy operator deciding whether or not a particular entity gets a contract or not.” Doc. 143 at 24. These arguments are confounding. Even a cursory review of Cowhey’s report reveals that he does not purport to offer any such opinions. Rhoads proffers him as a “financial damages” expert and the opinions in his report clearly relate to that topic. It is not required that he be an expert in all aspects of dry dock management, and there is certainly no requirement that have “experience being a Navy operator.”

To the contrary, Cowhey is clearly qualified to testify to the financial damages opinions that he proffers by nature of education, training, and experience. While Defendants do not challenge Cowhey’s financial expertise, we observe that it is extensive. Indeed, Cowhey holds a Bachelor of Science in Finance and a Master of Business Administration in Accounting. He testified that he has over thirty-five years of experience in forensic accounting and business valuation, and that experience specifically includes performing such analyses for marine industry companies. He has authored publications on business valuation and is a frequent speaker at relevant “professional, trade and business organizations . . . on matters ranging from accounting and finance, [and] business and intangible asset valuations.” He has previously qualified as an expert witness on, among other areas, business valuations and economic damages analyses, and he has “frequently been appointed by Special Masters and judges to serve as the ‘court’s expert’ in business and intangible asset valuation disputes and forensic accounting and tracing matters.” *See generally* Doc. 147-3 at 27–29. He is qualified.

2. Reliability

Defendants next challenge the reliability of Cowhey’s testimony as to both of the topics on which he opines—Rhoads’ lost profits damages and its “damages to repair the dry dock and surrounding property.” Doc. 143 at 25, 31. We address their arguments as to each of these areas of Cowhey’s testimony in turn.

a. Lost profits

Defendants argue that Cowhey’s lost profits opinion is unreliable in that he allegedly “uncritically accepted Rhoads’ own management financial projections,” and “made numerous assumptions . . . which run completely contrary to industry averages or trends.” *Id.* at 25–26. In response, Rhoads contends that the points Defendants have raised “are matters to address on cross-examination, not in a Daubert motion.” Doc. 147 at 6. Rhoads further argues that Cowhey was not required to “independently verify or audit the Rhoads data used to calculate damages,” and that, in fact, he “verified the accuracy of numbers in Rhoads’ general ledger.” For the reasons that follow, we find that Defendant’s arguments are without merit and that Cowhey’s opinion as to Rhoads’ lost profits are reliable.

At the outset, we observe that Cowhey calculated Rhoads’ lost business income under two distinct scenarios. In “Scenario 1,” he calculated lost profits by “research[ing] dry dock industry trends and the reported annual change in the industry’s revenue for 2013 through 2019.” Cowhey Rep. at 10. He then applied that industry-wide annual change to Rhoads’ actual revenue figure from 2012 to determine what Rhoads’ annual revenue would have been had its growth remained consistent with industry trends. *Id.* at 6–7, 10. In “Scenario 2,” he calculated lost profits utilizing Rhoads management’s projected revenue for the years 2014 through 2019. *Id.* He also calculated projected profit margins by “review[ing] the actual margins from two years prior to the first sinkhole and margins used in forming management projections,” as well as by

reviewing the actual profit margins of specific dry dock projects. *Id.* at 10–12. He then applied these profit margin projections to revenue projections for Scenarios 1 and 2 to determine lost profits. *Id.* at 13. Defendants take issue only with Cowhey’s methodology in calculating Scenario 2. They argue that he improperly relied on “Rhoads’ own financial management projections” without independently verifying them. This argument is without merit.

While it is true that challenges to the “facts and assumptions underlying the testimony of an expert witness” generally go to the weight of the testimony and not its admissibility, *Stecyk*, 295 F.3d at 414, it is also the case that “[i]f the data underlying ‘the expert’s opinion are so unreliable that no reasonable expert could base an opinion on them, the opinion resting on that data must be excluded.’” *Montgomery Cty. v. Microvote Corp.*, 320 F.3d 440, 448 (3d Cir. 2003) (quoting *In re TMI Litig.*, 193 F.3d at 697). More specifically, as then-Magistrate Judge Restrepo wrote, an expert’s “reliance on projections supplied by [the party], without independent verification, renders his analysis unreliable.” *Legendary Art, LLC v. Godard*, 2012 WL 3550040, at *4 (E.D. Pa. Aug. 17, 2012).

However, the circumstance before us is not one in which the expert has failed to independently verify projections supplied to him. To the contrary, Cowhey dedicated a significant portion of his report to explaining the steps taken “[t]o confirm the reasonableness of Rhoads’ projected revenues.” Cowhey Rep. at 6. To that end, Cowhey explained that he “independently researched industry trends, federal contracts, interviewed Rhoads’ management and customers, and analyzed supporting records to identify historical commercial and government contracts from 2013 through 2019 which either Rhoads lost the bid, or did not submit a bid, due to the various limitations and higher operating costs caused by the sinkholes.” *Id.* Accordingly, Defendants’ arguments that Cowhey “uncritically accepted” Rhoads’

projections are unfounded. Indeed, he does not suffer from any “lack of familiarity with the methods and the reasons underlying [the] projections [that would] preclude any assessment of the validity of the projections through cross-examination.” *ZF Meritor*, 696 F.3d at 298 (internal citations and quotations omitted).

Turning to Defendants’ second argument, that Cowhey “made numerous assumptions in calculating lost business income which run completely contrary to industry averages or trends,” we find that Cowhey’s assumptions were permissible, and his methodology is reliable. Here, Defendants contend that Cowhey improperly assumed that Rhoads “would be competitive in the dry dock market” despite its alleged status as a “relative neophyte” in the industry. Doc. 143 at 29. Further, they allege that he improperly assumed that the sinkholes were the cause of Rhoads’ failure to obtain certain certifications for operation and to win bids for contracts. *Id.* at 29–30. These arguments are without merit.

First, we note that Cowhey only “assumes that Rhoads . . . would be competitive in the dry dock market,” despite its alleged inexperience, to the extent that that assumption underlies Rhoads’ revenue projections, which Cowhey utilized in his Scenario 2 calculations. However, as we have already set out above, it was permissible for Cowhey to utilize those projections, as he independently verified their reasonableness. Moreover, his verification of Rhoads’ projections reasonableness evinces a sufficient factual basis for the underlying assumption that Rhoads “would be competitive in the dry dock market.” Indeed, he studied industry trends, analyzed Rhoads’ contractual bids, and interviewed Rhoads’ management and customers. He also utilized Rhoads’ actual revenue data from 2012, its first year operating the dry dock, in which it reported \$7,478,053 in revenue. Clearly, Cowhey had a sufficient factual basis to assume that Rhoads would be competitive in the market, notwithstanding any alleged inexperience.

Next, we find that Defendants' arguments as to Cowhey's assumptions that the sinkholes were the cause of Rhoads' failure to obtain certifications or to win contractual bids is misplaced. Here again, Defendants have misconstrued fundamental causation assumptions to be Cowhey's opinions. This misapprehension is illustrated in the conclusion of Defendants' arguments on this point, where they again aver that "Cowhey is not an expert in dry dock maintenance or the certification process and can offer no opinions or testimony about Rhoads' pursuit of dry dock certification," and that he "conducted no investigation regarding the reasons that Rhoads was not awarded contracts." Doc. 143 at 29–30. Defendants have essentially set out the same arguments here, under their challenge to Cowhey's reliability, as they did above in challenging his qualifications. Our resolution is thus the same. That is, Cowhey does not purport to offer opinions as to causation. He is proffered merely as a financial expert whose opinions necessarily rest on assumptions of causation and liability. *See Dorman*, 201 F. Supp. 3d at 690 ("All damages expert opinions are dependent . . . on the assumption that liability has been proven."). Rhoads will have the burden of proof at trial to establish causation and liability, and Defendants will have the opportunity to cross-examine Rhoads' causation experts as to whether their actions caused Rhoads to miss out on certifications and contracts, but it is "[t]he role of a damages expert is to calculate hypothetical damages given an assumed set of facts." *Brill v. Marandola*, 540 F. Supp. 2d 563, 570 (E.D. Pa. 2008). Accordingly, Cowhey's damages opinions are admissible, and his underlying assumptions may be probed on cross examination.¹²

¹² Additionally, we note Defendants' argument that Cowhey's application of industry trends based on information from the IBIS World Industry Report is unreliable in that he "ignored the fact that the publication predicted a major decline of 4.8% relative to Covid and other factors." However, as Rhoads points out, any covid-related decline in the industry would not bear on Cowhey's report in that his calculations only extend out until 2019. Defendants' contention on this point is unfounded.

b. Extra expenses

Next, Defendants argue that Cowhey's opinion "regarding Rhoads' damages to repair the dry dock and surround property" are unreliable "because he does not adequately account for the conditions at the property." Doc. 143 at 31. That is, Defendants aver that Cowhey's opinion as to the cost of repairs is unreliable in that he did not establish a "baseline" condition of the property and therefore "could not segregate what repairs were the result of lack of maintenance and pre-existing conditions, or the result of pile driving . . . that existed prior to any Triton activity." *Id.* at 33. Specifically, Defendants take issue with Cowhey's assumption that nearly all of the repair costs resulted from the second sinkhole, which occurred following Triton's pile driving activities, as opposed to from the first sinkhole, which appeared after TranSystems' and Shoreline's pile driving. Cowhey Rep. at 15. They contend that his opinion as to these costs unreliably fails to account for damage that was present prior to any pile driving, and fails to separate damage that allegedly occurred from TranSystems' and Shoreline's pile driving, thereby pinning the entire cost on Triton. Doc. 143 at 33.

Here again, Defendants seem to have blurred the line between Cowhey's assumptions as to causation and his opinions as to damages. Indeed, Cowhey himself does not opine as to whether the first or second sinkhole caused specific damage to Rhoads' property. Rather, his opinion rests on "an assumed set of facts" (*i.e.*, that the majority of the cost of repairs resulted from the second sinkhole), as is permissible, "so long as those assumed facts are reasonably based on the evidence in the record." *Brill*, 540 F. Supp. 2d at 570. Here, the facts upon which Cowhey's opinion relies are clearly based on evidence in the record. In fact, his calculations as to repair costs are directly based on Rhoads' actual, dated invoices for the repair activities, which

are appended to his report, as well as his interviews with Rhoads management. *See* Cowhey Rep. at 15; *id.* at Ex. 4.1–4.5.

While we acknowledge, as Defendants have pointed out, that some of the assumptions underpinning these specific damage calculations may conflict with other record evidence, we are also mindful that expert testimony is admissible so long as “the record contains *some* factual basis—albeit shaky—for [the] testimony.” *Stecyk*, 295 F.3d at 415 n.3 (emphasis in original); *id.* (“A party confronted with an adverse expert witness who has sufficient, though perhaps not overwhelming, facts and assumptions as the basis for his opinion can highlight those weaknesses through effective cross-examination.”); *see also Giterman v. Pocono Med. Ctr.*, 2019 WL 1452936, at *7 (M.D. Pa. Apr. 2, 2019) (“[T]he existence of conflicting evidence is not a basis to exclude an expert’s testimony.”). As one district court within this circuit explained, with this background in mind, “[h]ere, the facts relied upon by [the witness] are neither nonexistent nor insufficient; they are simply disputed and should be addressed on cross-examination.” *Guy Chem. Co., Inc. v. Romaco Inc.*, 2009 WL 10690008, at *3 (W.D. Pa. Oct. 26, 2009). Given the foregoing, we conclude that Cowhey’s opinion regarding the cost of repairs rests on a sufficient factual basis to support its admissibility and that any deficiencies can be explored on cross examination.¹³

¹³ We observe that, in addition to challenging Cowhey’s testimony on his alleged failure to account for the condition of the property, Defendants assert that Cowhey’s calculations resulted in figures that are “overstated, inappropriate and/or unsupported.” Doc. 143 at 33. They contend that this deficiency results from “a lack of objective data,” for example, regarding “the historical frequency and volume of mud removal.” *Id.* We find that this contention is without merit. As set out above, Cowhey relied on documentation including invoices from repair activities to determine expenses. To the extent that Defendants dispute that data underpinning his calculations, they have articulated a challenge to the weight of Cowhey’s opinions, not their admissibility. *See Walker v. Gordon*, 46 F. App’x 691, 695–96 (3d Cir. 2002). (“An expert is . . . permitted to base his opinion on a particular version of disputed facts and the weight to be accorded to that opinion is for the jury.”).

3. Fit

Finally, Defendants challenge the “fit” of Cowhey’s testimony. Their arguments here are similar to the ones we have already rejected with regard to Cowhey’s qualification and reliability. That is, they contend that he “(1) made numerous unsupported assumptions; (2) relied upon unverified data provided exclusively by Plaintiff; (3) lacks any knowledge as to the industry; and (4) lacked any knowledge as to critical issues, such as certifications, that underpinned Rhoads’ own projections.” Doc. 143 at 34–35. They further argue that “Cowhey is not being as an independent expert” and that “[h]is testimony is nothing more than way [sic] to provide legitimacy to Rhoads’ own rose-colored beliefs.” *Id.* at 36.

These arguments fail with regard to the fit of Cowhey’s testimony for the same reasons they failed with regard to his qualification and reliability. Namely, Cowhey’s assumptions have sufficient factual support in the record, and Defendants’ assertion that he failed to independently verify data is inaccurate. Further, he performed thorough research to familiarize himself with the industry, and it is not necessary for him to be an expert in dry dock certification. For these reasons, we reject Defendants’ overarching argument that Cowhey is essentially a trojan horse for admitting Rhoads’ projections under the guise of expert testimony. To the contrary, he utilized Rhoads’ projections in calculating damages under one of two hypothetical scenarios included in his report. While one is a scenario in which Rhoads performance reached their projections, the other is a scenario in which Rhoads tracked the industry trend. More importantly, though, Cowhey did not merely shoehorn Rhoads’ projection into his calculations, as Defendants allege. Rather, he independently verified their reasonableness through extensive market research and interviews with Rhoads management and customers. We thus find that Defendants’ arguments are without merit, and that Cowhey’s testimony will assist the jury in understanding

Rhoads claims for damages. *See TMI*, 193 F.3d at 663. Accordingly, his testimony satisfies the fit prong.

K. Defendants' motion to preclude Charles Boland (Civ. No. 17-266, Doc. 146)

Finally, Triton moves to preclude another Rhoads damages expert, Charles Boland of Greyhawk, LLC. (Civ. No. 17-266, Doc. 146.) Boland was retained to provide “assistance in evaluating damage to Building 669 resulting from the sinkhole, and in determining the scope and cost of remedial measures necessary for repair of the damaged components of the building.” (Doc. 158-3 at 1) (“Boland Jan. 2018 Rep.”). To that end, Boland “developed cost estimates for . . . remedial work to repair impacts to Building 669 caused by the sinkhole.” *Id.*; Doc. 146-2 at 1 (“Boland Feb. 2018 Rep.”). Triton challenges Boland’s testimony based on his qualifications, its reliability, and its fit. Triton’s challenge here is predicated largely on similar bases as Defendants’ challenge to Greg Cowhey’s testimony. As such, Triton’s motion will be denied for reasons similar to those set out above.

1. Qualification

Triton contends that Boland is not qualified to testify in that he is “simply not qualified to offer causation opinions in this matter given that he is not a structural or geotechnical engineer.” Doc. 146 at 18. As with Cowhey, Triton’s argument as to Boland improperly focuses upon his lack of qualifications to offer causation opinions despite the fact that he is proffered only as a damages expert. In fact, Triton quotes Boland’s deposition testimony in which he expressly states that he is not “giving any opinions . . . as to causation.” *Id.* at 19. Still, Triton asserts that he is “essentially offering opinions that pile driving caused the damages to Building 669.” *Id.*

Triton misapprehends Boland’s opinions. Our review of his reports concludes that it is clear that he offers no opinions as to causation. Rather, as was the case with Cowhey, Boland’s

damages opinions are predicated on an assumption that Rhoads is able to prove liability. Specifically, Boland assumes that Rhoads' will successfully prove Defendants' liability for the damages identified by its structural engineering expert, the O'Donnell & Naccaroto ("O&N"). Boland Jan. 2018 Rep. at 2. Indeed, Boland's role is merely to prepare a "cost estimate of the remedial scope of work developed by O&N. *Id.* As discussed above, "[e]xpert opinions on damages commonly assume liability, which must be established independently." *U.S. Accu-Measurements, LLC v. Ruby Tuesday, Inc.*, 2013 WL 1792463, at *8 (D.N.J. Apr. 26, 2013). Accordingly, it was permissible for Boland to assume liability, and it is not required that he be qualified to offer an opinion as causation, as he simply does not offer any such opinion.

Triton also contends that Boland is not qualified "given his dearth of experience in maritime construction and the specific issues in this case." Doc. 146 at 19. This argument is without merit. First, there is no requirement that Boland have experience in the "specific issues in this case," as it is well established that "a broad range of knowledge, skills, and training qualify an expert." *Paoli*, 35 F.3d at 741. Moreover, as Rhoads points out, Boland "is offering an opinion about the cost to repair a two-story industrial brick and mortar building located inland dozens of yards away from the dry dock and riverfront. He is not, therefore, required to have maritime or marine construction experience." (Doc. 158 at 3.) We agree. Indeed, Triton does not challenge Boland's expertise in construction and cost analysis, which is extensive and directly applicable to the opinions he offers here. Boland has "over 40 years of experience in engineering, construction, project management, and in cost/schedule analysis." (Doc. 158-6 at 1) ("Boland CV"). Accordingly, he is qualified to testify to the opinions he offers here.

2. Reliability

Triton first contends that Boland's testimony is unreliable in that he did not "determine the state of Building 669 prior to the sinkhole events," and thus is unable "to segregate what repairs were the result of lack of maintenance and pre-existing conditions, or the result of pile driving from the west side . . . prior to any Triton activity." Doc. 146 at 20, 23. Triton's argument on this point fails for the same reason as their argument regarding Boland's qualifications; namely, it misconstrues Boland's causation and liability assumptions to be his opinions. Indeed, Triton incorrectly asserts that Boland is offering causation opinions, and that without ascertaining the pre-existing state of the Building, he cannot reliably determine which damages were caused by Triton's pile driving as opposed to those that may have been caused by, for example, a lack of maintenance. *Id.* at 23–24. However, Boland does not offer, nor does he purport to offer, any opinions as to the cause of the damage at Building 669. Rather, his role as an expert is simply to calculate the costs of implementing the repairs that have been identified by Rhoads' causation experts as resulting from Defendants' pile driving activities. His opinion thus necessarily rests on an assumption of liability that Rhoads will prevail in proving causation for the damages identified by its causation experts. *See Dorman*, 201 F. Supp. 3d at 690 ("All damages expert opinions are dependent . . . on the assumption that liability has been proven."). Triton therefore argues that Boland's "assumption of causation renders his testimony unreliable, but [it] does so without attacking his methodology." *Guy Chem. Co., Inc.*, 2009 WL 10690008, at *2. This argument is misdirected at Boland, as a damages expert, and is not a basis to exclude his testimony. Rhoads will have the burden at trial to independently prove liability prior to proffering Boland's opinions as to damages, and the challenges Triton has articulated here will be more properly directed at Rhoads' causation and liability experts, not Boland.

Next, Triton argues that Boland's opinion is unreliable in that it is "now moot," as it was partially based on a bid from a contractor that "was put out to bid years ago and the contractor bid has certainly expired." Doc. 146 at 25. In addition to being "moot," Triton contends that the estimate is unreliable because it relies on a single bid, whereas Boland testified that he would have "prefer[red] to have multiple bids." *Id.* Unlike its argument with regard to causation assumptions, Triton's contention here properly challenges Boland's methodology and the reliability of his opinion. Nonetheless, we are not persuaded by Triton's argument and conclude that Boland's opinion is reliable.

The specific bid with which Triton takes issue relates to Boland's estimate of the cost to "repair visible above ground damage." *See* Boland Jan. 2018 Rep. at 1; Boland July 2020 Rep. (Doc. 158-7) at 1, 3. In his January 2018 report, Boland originally estimated the cost for this work to be \$354,280. Boland Jan. 2018 Rep. at 2. In July 2020, Boland prepared a supplemental report that "provides updated cost information for repairs based on actual proposals." Boland July 2020 Rep. at 1. "To better gauge the cost associated with required repairs," Boland "put the work out for bid." *Id.* Boland initially did not receive any bids, and "[i]t was determined that additional information was necessary to allow the contractors to price the work." *Id.* He then sent out another invitation for bids and this time received a bid from only one contractor, General Masonry and Restoration Inc. ("General Masonry"). *Id.* General Masonry estimated the cost to "repair visible above ground damage" to be \$2,657,359.¹⁴ *Id.* Triton contends that Boland's

¹⁴ Triton's argument does not specifically address the significant difference between Boland's initial estimate and the one updated to reflect the bid received from General Masonry. Nonetheless, we observe that, in his report, Boland explained that the cost estimate differed from his initial estimate due to "the extent of the work to be done." *Id.* That is, he explained that his initial estimate "was based on doing only the brick and concrete replacement specifically depicted on the drawing prepared by O'Donnell & Naccarato," which included only repairing "the first-floor area of the brick wall." *Id.* at 2. However, he explained that "one of the reasons no

methodology is unreliable in that he received only a single bid, and that the scope of the work for the second round of bid invitations was increased relative to the first round. We are not persuaded.

We note initially that soliciting and reviewing actual bids from contractors strikes us as being a generally reliable methodology for estimating the cost to complete construction projects. Indeed, Triton does not appear to take exception with the use of bids to obtain cost estimates generally. Rather, it specifically contends that one bid is insufficient, particularly in light of Boland's testimony that he would have "prefer[red] to have multiple bids." It further contends that the scope of the work outlined in the bid invitation was improper. In response, Rhoads argues that Boland's reliance on General Masonry's bid is permissible in that he testified that he found the bid to be "comprehensive" and that General Masonry is an experienced contractor. Doc. 153 at 7. Rhoads further argues that it was necessary for Boland to expand the scope of the work in the second bid invitation, because as Boland explained, "one of the reasons no bids were provided after the first invitation is because the contractors did not think it was safe or feasible" to perform only the more limited repairs outlined in the first bid invitation. *Id.* at 7–8.

While we agree with Triton—and with Boland, for that matter—that more bids may have been preferable, we are not persuaded that this warrants preclusion of Boland's testimony. Indeed, it is not required that an expert's testimony "has the best foundation, or even [that] . . . the opinion is supported by the best methodology or unassailable research." *Karlo*, 849 F.3d at 81). Rather, "expert testimony is admissible so long as "the record contains *some* factual basis—

bids were provided after the first invitation is because the contractors did not think it was safe or feasible to repair only the first-floor portion of the wall," and that consequently, "the second [bid] invitation included instruction to rebuild the damaged façade all the way to the parapet at the roof of the building. The length of time for this additional work . . . increased the estimated costs from the original estimate by Greyhawk." *Id.*

albeit shaky—for [the] testimony.” *Stecyk*, 295 F.3d at 415 n.3 (emphasis in original); *id.* (“A party confronted with an adverse expert witness who has sufficient, though perhaps not overwhelming, facts and assumptions as the basis for his opinion can highlight those weaknesses through effective cross-examination.”).

Here, Boland explained in his deposition that General Masonry “provided a comprehensive bid” and was experienced in completing the specific work that was called for. Boland Dec. 21, 2020 Dep. at 32:7–33:15. Further, the fact that the scope of the work to be completed was increased for the second round of bid invitations does not render his opinion unreliable, particularly considering his determination that it was necessary to expand the scope to make it “safe and feasible” for the work to be completed. Accordingly, we conclude that there is a sufficient factual basis for Boland’s opinion and that the scope of quantity of bids that informed that opinion may be explored on cross examination. *See Daubert*, 509 U.S. at 596 (“Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.”).

3. Fit

Finally, Triton challenges the “fit” of Boland’s opinion. It argues that his testimony will not help the jury to “understand the evidence or to determine a fact in issue” because his “estimates were based solely on RS Means Construction estimates” and “[t]he estimates he provided were not specific to this case.” Doc. 146 at 27. These arguments are without merit.

Boland’s reports demonstrate that the estimates he provided were in fact “specific to this case.” Indeed, he worked directly with Rhoads’ causation experts to understand what repairs were needed based on their determinations of the damage caused by Defendants’ pile driving. *See, e.g.*, Boland Jan. 2018 Rep. at 1. For example, his report specifically states that O&N

“identified specific areas of distress visible at [Building 669] . . . that were occasioned by the sinkhole,” and that he prepared cost estimates for the “remedial construction work scope” suggested by O&N. *Id.* at 2. Thus, it cannot be said that his estimates “were not specific to this case.” Further, it was permissible for him to determine the cost of those repairs suggested by O&N using RS Means. *See In re CertainTeed Fiber Cement Siding Litig.*, 303 F.R.D. 199, 205 (E.D. Pa. 2014) (“RS Means is a cost estimator that accounts for regional differences in labor and materials costs by using zip codes to factor in the specific costs of nearly any type of construction in a particular area of the country. It has been used in the construction/building industry for almost 40 years.”).

Taken together, we conclude that Triton’s arguments as to the fit of Boland’s opinions are without merit. Rather, his testimony will assist the jury to understand and evaluate the cost to repair damages to Building 669 allegedly resulting from Defendants’ pile driving activities. *See TMI*, 193 F.3d at 663. Accordingly, his testimony satisfies the fit prong.

IV. CONCLUSION

For the reasons set out above, we have determined, in light of the liberal standards of admissibility embodied in Fed.R.Evid. 702, that the parties’ expert witnesses are largely “qualified” and that their opinions are “reliable” and “fit” the facts of this case. Our resolution of the motions addressed in this omnibus opinion is therefore consistent with the directive that “rejection of expert testimony is the exception and not the rule.” Fed.R.Evid. 702. An appropriate order follows, setting out our specific resolution of each motion, consistent with the determinations and reasoning discussed herein.